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JAGGELER & MUSSER SEED CO.

LOS ANGELES



1924



HOW TO ORDER BY MAIL

YOUR NAME AND ADDRESS—Be sure that your name and address are written very plainly on each order. We frequently receive orders with either the name or the address omitted.

It is important that you fill out plainly and in full the mail order blank which accompanies this catalog. This will avoid delay in your order. If your order does not reach you promptly please notify us.

CASH WITH ORDER—Remittances should be made by post office money order, express money order or bank draft for a sufficient amount to cover the entire order and required postage if any. Stamps of 2 cent denomination will be accepted for small amounts.

DO NOT SEND CURRENCY. Should it be lost there is no recourse.

PRICES—Prices in this catalog cancel all previous issues and are subject to market fluctuations and to change without notice. For quantity prices write for current quotations.

SHIPPING—We will use our best judgment as to the most efficient way of sending orders when specific directions are not given. If special directions in shipping are needed, state them explicitly in space provided for them on order blank.

SEEDS BY MAIL

Parcel post rates apply on weights up to 70 lbs. in the first, second and third zones (see table below) and in all zones of 300 miles or more the limit weight is fifty pounds. Parcel post rates are usually cheaper than express with the added advantage of having the parcel delivered to your door. We pay postage on everything priced postpaid but on figuring postage for larger orders please refer to the rate table below. Poisons are not mailable. They must be sent by express or freight. We also advise sending heavy hardware and long handle tools by express or freight as many of them are not mailable. We are constantly in touch with shipping regulations and very often if we are allowed the privilege of using our own judgment we can make a saving to our customers. If you are in doubt about how shipment should be made and wish to leave it for us to decide, mark shipping instructions on your order sheet "cheapest way."

All orders that must be shipped into **Mexico** have an extra charge, viz., all orders to the value of \$5.00 to \$50.00 require \$1.00 extra and all orders above \$50.00 require \$2.00 extra for consular fees.

FOREIGN PARCEL POST—The parcel post rate to foreign countries is 12 cents per lb. Foreign correspondents should add a sufficient amount to cover postage at this rate, if not ordering postpaid articles.

DOMESTIC PARCEL POST RATES On Seeds, Plants, Bulbs, Roots, Books, Tools, etc. within the U. S. and Possessions		First Pound or Fraction	Each Additional Pound or Fraction
First Zone, Los Angeles and within 50 miles of Los Angeles		5c
Second Zone within 50 to 150 "	"	5c
Third Zone 150 to 300 "	"	6c
Fourth Zone 300 to 600 "	"	7c
Fifth Zone 600 to 1,000 "	"	8c
Sixth Zone 1,000 to 1,400 "	"	9c
Seventh Zone 1,400 to 1,800 "	"	11c
Eighth Zone all over 1,800 "	"	12c

NON-WARRANTY: Note—There are so many contingencies to be encountered in growing plants from seed and in setting out plants that are dependent on the weather and other conditions over which we have no control, that success in planting is not altogether dependent on the seed or plant. We will send out only seed which we believe will grow and produce the kind of plant and variety represented, but:

Aggeler & Musser Seed Co. give no warranty, expressed or implied, as to description, quality, productiveness, or any other matter of any seeds, bulbs, plants or trees they send out, and they will not be responsible in any way for the crop. If the purchaser does not accept the goods on these terms, they are at once to be returned.

AGGELER & MUSSER SEED CO.

H. L. Musser
Our President since our
Incorporation in 1896

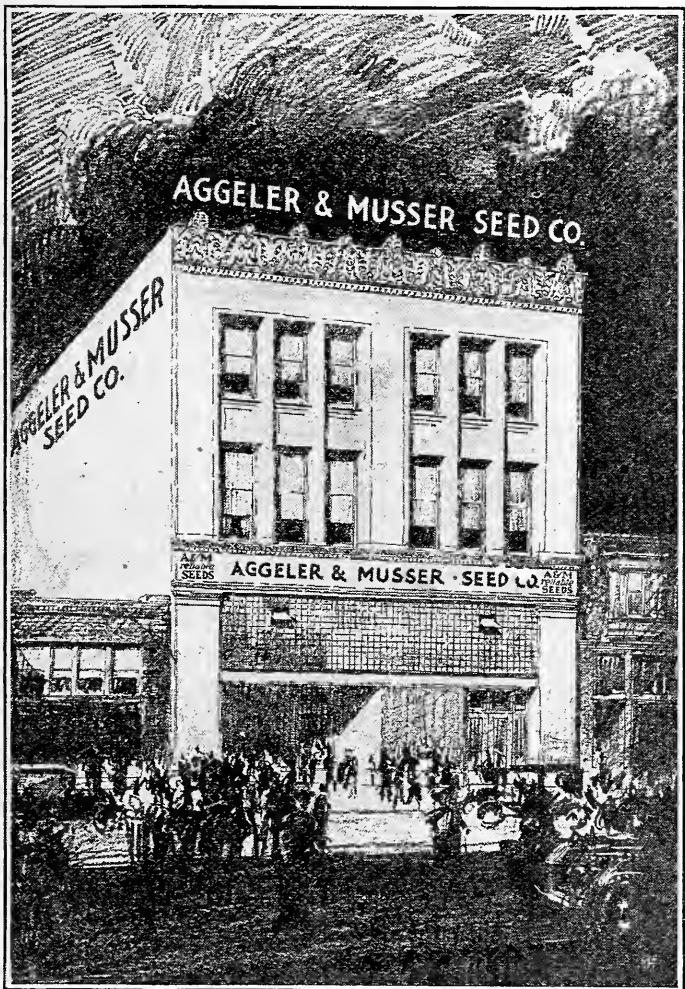
E. A. Aggeler
Our Vice-President since our
re-organization in 1905

W. B. Early
Our Secretary Since 1905

F. C. McNabb
Treasurer

Thirty-first Annual Catalog of the Aggeler & Musser Seed Company

ESTABLISHED 1893.



Our Retail Store at 750 South Spring Street

Our seed and bulb catalogs aim to give all information necessary to guide you in the proper selection for each season.

This place is an agricultural and horticultural seed store in which every thing pertaining to gardening may be found.

Seeds, plants, fertilizers, sprays and sprayers, garden tools, garden hose, bee and poultry supplies, lawn mowers, birds and bird cages, gold fish and small aquariums.

In order that this store may be attractive and interesting we have added an aquarium of gold fish, and a bird department in which we carry a full line of canaries trained to sing, warble or roll. Also food and supplies for all pet animals.

These things add much to the cheer of a home and to the comfort of invalids and to persons who are much alone.

Being centrally located at Eighth and Spring Streets, it is convenient to all who visit the down town section of the city. If you would avoid delay, telephone your order to be ready at a certain hour. It will be at the Call Counter for you when you arrive.

See Planting Calendar on Inside Back Cover

Read this Announcement!

OUR BIG retail store at 750 South Spring Street is an ideal California seed house.

In this store we have drawers and bins for over 1,000 varieties of garden and field seeds. Seeds suited to every condition of soil and climate; seeds to thrive each season and to meet the requirements of the various markets throughout the year.

We have containers for approximately 1,000 varieties of Flower seeds to not only meet every soil and climatic condition but to make the home place cheerful throughout the year and to please every human fancy. For example, let us state that we have seeds of 125 varieties of sweet peas in order that you may have flowers of every color, every day in the year. We have zinnias of every type and color and the same is true of almost every other kind of flower.

In this store we have a plant department where you may see beautiful flowering potted plants, ornamental shrubbery, plants of almost every variety for setting out flower beds, hedges, and borders, also vegetable plants in season.

Our bulb department offers many varieties to be planted each season that you may have flowers throughout the year.



Our Market Branch Store is at 767 South Central Avenue, opposite the Terminal Market. It is a busy place in the early morning market hours requiring six experienced men.

Main Office and Mail Order Department, Mill and Warehouse.

We have concluded that it is advisable to have our Main Offices at the Warehouse. The great majority of our customers live out of town and come into the city with their cars, they find it very unpleasant to drive through the business section and inconvenient to abide by the parking regulation. The frequency of complaints has lead us to the conclusion that we could better serve our patrons at the warehouse at 1934 East Fifteenth Street on the main paved thoroughfare from Alameda Street to Santa Fe Avenue. There is also no parking limit in this district. It is close in and very convenient to reach by auto. We invite all our wholesale customers to call at our offices at the warehouse, where it is a pleasure to wait upon

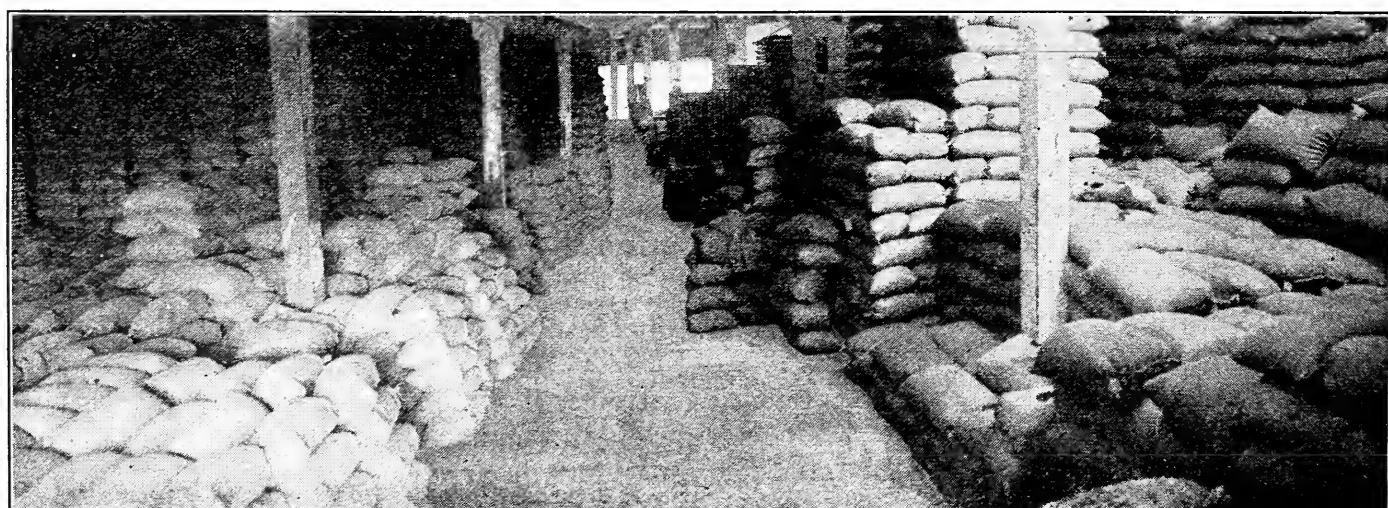
you, to show you the merchandise and make immediate delivery, which is a great convenience to customers, wholesale and retail, who come with their cars.

At this warehouse we are prepared to wait upon all retail customers who will find it more convenient to deal here.

It is here we can show you the great work that is necessary to run a big up-to-date seed house. You will be interested to see our cleaning mills, the mail order department and the shipping and nursery department. After a visit here you will appreciate the great work we are doing to serve you and to safeguard your interests. We invite you to come to our warehouse and see for yourselves.



Our Warehouse and Mill at 1934 East 15th Street; Size of Warehouse 110x230; Size of Mill 60x60.



A Section in Our Warehouse

Where Market Gardeners Buy

Our Market Store at 767 South Central Avenue, is the most complete institution of its kind. Here we are headquarters for Market gardeners throughout the Southwest and old Mexico. From this store we have experienced salesmen radiating daily into every garden section around Los Angeles, soliciting orders and delivering merchandise and giving expert advice. The manager and every salesman at the store is an expert seedsman, competent to advise intelligently, you will do well to consult with them when making your purchase, whether you buy seeds, fertilizers or insecticides.

Diversified Farming

Last Fall during the latter part of October we visited the extensive gardens about Camarillo. The thermometer reached about 95 degrees for several days. Here we saw many large fields of lettuce just approaching the mature stage but already threatening to "blow" (to open up without heading). Cold weather would save the lettuce thereby prevent a loss of many thousands of dollars. The same growers had many acres of tomatoes in prime condition just approaching the harvest stage. The continued warm weather would be beneficial to the tomatoes and prolong the harvest time, but cold wet weather would destroy the fields.

This is a good illustration of the advantage of diversified farming. This farmer is sure to have one good crop. If he had only the lettuce, all his season's work would have gone for naught, but the tomatoes have compensated for the outlay of both crops with a good margin of profit.



Our Mail Order Department



Receiving Department

It is in this warehouse we receive all seeds whether in carloads or less. They are here inspected, cleaned, numbered and two samples taken; one is given to our gardener to be planted in our trial grounds that they may be tested for germination and type. The other sample is taken to the laboratory to be tested for germination and purity. This work we have been doing for many years with the result that our seeds have an enviable reputation for reliability.

Delivery Department

It is from this warehouse that all seeds are delivered to trucks and distributed to all parts. Our service in this department has been lauded by truckers as the most efficient in the city.

Our Mail Order Department

(See page 3)

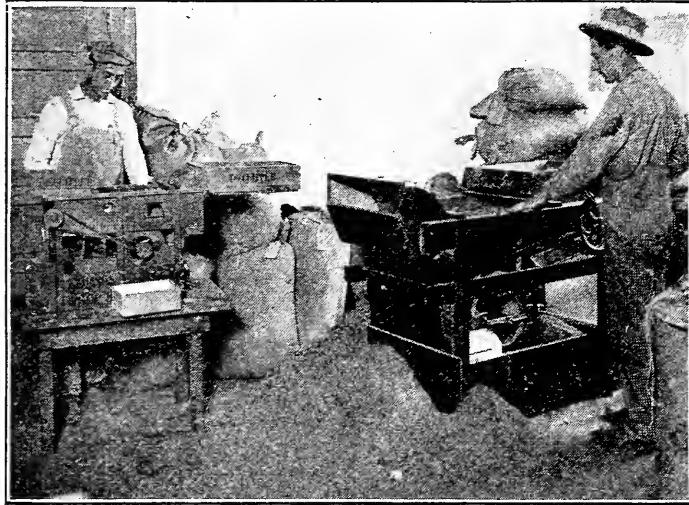
This department occupies a space in the warehouse 70x100 feet. This department is a large institution in itself. We have a packet filling machine which fills all packets with equal portions of seeds and seals them. It has a capacity of sixty thousand packets per day.

This department requires the full service of several efficient clerks whose sole duty is to receive the orders, read them, if correct, give them the O. K., numbers and record them IN. After they have been filed by an army of clerks, they are again checked up, weighed, stamped and recorded OUT.

This system has brought many favorable compliments from customers regarding our efficiency.

Get Your Name on Our List

Be sure to send an order for seeds so that your name will continue on our mailing list. You will then receive our next catalog as soon as it is from the press:



SAFEGUARDS AGAINST CROP FAILURES
Mills of Every Size
Cleaning Small Seed in the Stock Room.

Our Trial Garden

In our trial garden we plant seeds of vegetables as soon as they are received (if at the proper season). Within eight or ten weeks we can determine if they are true to type, and the purity.

It is in this garden we get much practical experience with culture, good and bad, with fertilizers, with diseases, with insects and their remedies. This is service that protects the customer.

"Your seeds have given excellent satisfaction and your seed catalog is indispensable."

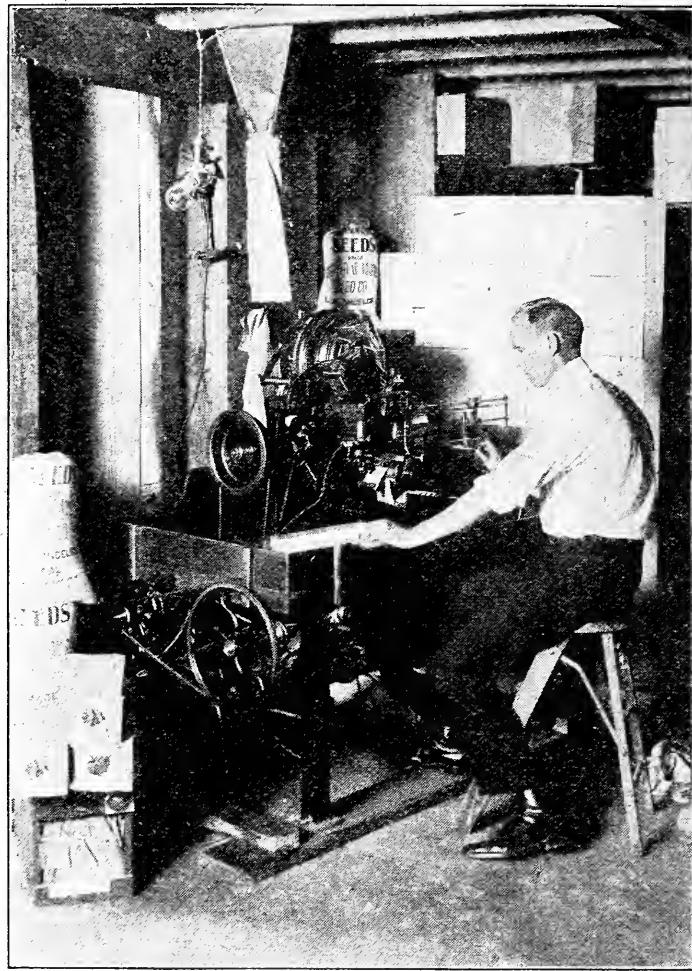
MRS. M. A. LUDWIG, Los Angeles.

"Please send me your 1924 catalog. We like the seeds we bought from you. They are what you say they are."

MRS. R. S. EDWARDS, California.

PACKET SEEDS THAT GROW

Look for this case. If your dealer does not carry Aggeler & Musser Seed Co.'s packet seeds request him to get them, because we do not put our seeds out on commission. Commission seeds are put up and placed on sale throughout the country in August, long before the new crop seeds are harvested. Therefore the seeds are at least one year old before they are put into packets. Our packets are never put up until the new crop seed has been delivered. You are sure to get fresh seeds when you buy them from the AGGELER & MUSSER SEED CO.'S CASE.



THE SEED PACKET FILLER

We have installed a Seed Packet Filling Machine. With this machine we can fill 60,000 packets per day.

A Suggestion

When you have more plants than you want, sell or give to your neighbors. Do not waste!

Each season some one in every community has neglected to grow plants for their garden, often with the idea that they will need only half a dozen each of several kinds and they can be bought cheaper than they can be grown, all of which is very true. Therefore let us suggest that when you are reading this catalog preparatory to making up your order for seeds take into consideration that many of your neighbors will want some plants. So if you hesitate to order a packet of this or that because three or four plants are all you need, just consider that your neighbor will want some; it will not be much trouble to grow them along with other things.



Look For This Case at Your Local Dealer's.

Many Reasons Why You Should Be a Successful Agriculturalist

Modern Methods of Agricultural Education

The benefits of the wonderful system of agricultural education that was started scarcely more than five years ago are already being realized in the rush for suburban homes. What will be the effect when the thousands of children who are now learning the rudiments of agriculture in the elementary schools and in the High Schools. The young people are almost full fledged farmers, learning to plow with a tractor, to raise livestock and poultry, successfully competing for the prize at the county fairs, and after the High School the Farm Bureau, headed by thoroughly competent authority trained at the State University of Agriculture and backed by that institution with the entire educational force of competent men connected with it. The Farm Bureau has the co-operation of the State Department of Agriculture working through the several county horticultural officers; and still more, all research work of the Agricultural Department of the United States is at the service of the Farm Bureau.

As soon as you read this ascertain from your Farm Bureau the fee for your county and become a member without further delay. You are missing something worth while. The Farm Bureau Monthly that comes to you free is worth many times the price of membership.

WHY YOU SHOULD BELONG TO THE FARM BUREAU:

1.—Because you get more real agricultural education for your investment than from any other source.

2.—You can get it when you want it, on any agricultural subject in which you may be interested.

3.—When insects are destroying your garden, when your plants are dying from disease, your farm advisor will tell you what to do.

4.—When your poultry or livestock are sick, consult your farm advisor.

5.—With the aid of the Farm Advisor you should have the best of everything, whether it be livestock or crops of any kind.

6.—You can get advertising, and much assistance in marketing your crops.

7.—You are co-operating with approximately one million members of the American Farm Bureau Federation, all working to better conditions for the real farmer.

Attend the Fruit Growers and Farmers Conventions held somewhere during October each year. Also be sure to attend the Farm Bureau meetings.

The Farm Bureau Monthly advises you where and when there will be a meeting of Dairymen, Poultrymen, Grape Growers, growers of citrus fruit, growers of deciduous fruits, potato growers, and various other meetings. At these meetings every phase of the subject is discussed so that each one may learn the causes of their respective failures and how to avoid them.

It Is Not Generally Known That—

The Horticultural Department of the State of California is one of the most efficient of its kind in the world; yet few people realize that it is the work of this office that we are protected against the entrance into California of destructive insects, and it is from this office that we are given every aid to control and prevent enormous losses from insects, animal pests and troublesome weeds. From this office you may have advice and assistance for the asking.

If you would appreciate the work of the Department of Agriculture of the State of California, write the Department of Agriculture, Sacramento and ask for "Third Report of the California Department of Agriculture." Vol. XI, Nos. 11-12.

Agricultural Courses by Mail are Popular

An excellent means of obtaining a knowledge of the fundamentals of agriculture is afforded by the correspondence courses offered by the University of California college of agriculture. These courses are intended primarily for those who are already engaged in agricultural pursuits, or prospective farmers. When an intending student enrolls by sending his application and the fee of \$2 for a selected course to the Division of Agricultural Education, University of California, Berkeley, a mimeographed sheet of information and questions is sent to him by mail, these questions, upon being answered, are corrected at the university and the next sheet of lessons and questions is sent out.

The courses offered this year cover the following subjects: Alfalfa, corn, onion, barley, pear, walnut, almond, fig, plum, prune, date, avocado, and apricot culture; grape growing, citrus fruit growing, semi-tropical fruit growing, olive growing, vegetable gardening, dairy, swine, sheep, poultry and rabbit husbandry; milch goat raising, home floriculture, home ground ornamentation, canning and preserving, normal nutrition, lumber and its uses, business aspects of California agriculture, and apianary management.

The courses are proving very popular and the enrollment is steadily increasing, according to the university authorities.

UNIVERSITY OF CALIFORNIA COLLEGE OF AGRICULTURE
Station Publications Available for Free Distribution

Bulletins

- 261. Melaxuma of the Walnut, "Juglans regia."
- 270. A Comparison of Annual Cropping, Biennial Cropping, and Green Manures on the Yield of Wheat.
- 278. Grain Sorghums.
- 279. Irrigation of Rice in California.
- 280. Irrigation of Alfalfa in the Sacramento Valley.
- 283. The Olive Insects of California.
- 285. The Milk Goat in California.
- 286. Commercial Fertilizers.
- 287. Vinegar from Waste Fruits.
- 294. Bean Culture in California.
- 297. The Almond in California.
- 298. Seedless Raisin Grapes.
- 312. Mariout Barley.
- 313. Pruning Young Deciduous Fruit Trees.
- 319. Caprifigs and Caprification.
- 321. Commercial Production of Grape Syrup.
- 331. Phylloxera-Resistant Stocks.
- 332. Walnut Culture in California.
- 336. The Preparation of Nicotine Dust as an Insecticide.
- 337. Some Factors of Dehydrator Efficiency.
- 341. Studies on Irrigation of Citrus Groves.
- 342. Hog Feeding Experiments.
- 345. Fertilizer Experiments with Citrus Trees.
- 347. The Control of Red Spiders in Deciduous Orchards.
- 349. A Study of Sidedraft and Tractor Hitches.
- 350. Agriculture in Cut-over Redwood Lands.
- 351. California State Dairy Cow Competition.
- 354. Results of Rice Experiments in 1922.
- 355. The Peach Twig Borer.
- 356. Observations on Some Rice Weeds in California.
- 357. A Self-mixing Dusting Machine for Applying Dry Insecticides and Fungicides.
- 358. Black Measles, Water Berries, and Related Vine Troubles.
- 360. Gum Diseases of Citrus Trees in California.
- 363. The Pruning of Citrus Trees in California.

Circulars

- 70. Observations on the Status of Corn Growing in California.
- 82. The Common Ground Squirrel of California.
- 87. Alfalfa.
- 110. Green Manuring in California.
- 111. The Use of Lime and Gypsum on California Soils.
- 113. Correspondence Courses in Agriculture.
- 117. The Selection and Cost of a Small Pumping Plant.
- 127. House Fumigation.
- 136. Melilotus Indica as a Green-Manure Crop for California.
- 144. Oidium or Powdery Mildew of the Vine.
- 151. Feeding and Management of Hogs.
- 152. Some Observations on the Bulk Handling of Grain in California.
- 155. Bovine Tuberculosis.
- 157. Control of the Pear Scab.
- 159. Agriculture in the Imperial Valley.
- 160. Lettuce Growing in California.
- 161. Potatoes in California.
- 166. The County Farm Bureau.
- 167. Feeding Stuffs of Minor Importance.
- 172. Wheat Culture.
- 173. The Construction of the Wood-Hoop Silo.
- 174. Farm Drainage Methods.
- 184. A Flock of Sheep on the Farm.
- 190. Agriculture Clubs in California.
- 193. A Study of Farm Labor in California.
- 198. Syrup from Sweet Sorghum.
- 199. Onion Growing in California.
- 201. Helpful Hints to Hog Raisers.
- 203. Peat as a Manure Substitute.
- 209. The Function of the Farm Bureau.
- 210. Suggestions to the Settler in California.
- 212. Salvaging Rain-Damaged Prunes.
- 214. Seed Treatment for the Prevention of Cereal Smuts.
- 215. Feeding Dairy Cows in California.
- 217. Methods for Marketing Vegetables in California.
- 219. The Present Status of Alkali.
- 224. Control of the Brown Apricot Scale and the Italian Pear Scale on Deciduous Fruit Trees.
- 228. Vineyard Irrigation in Arid Climates.
- 233. Artificial Incubation.
- 235. Soil Analysis and Soil and Plant Inter-relations.
- 236. The Common Hawks and Owls of California from the Standpoint of the Rancher.
- 238. The Apricot in California.
- 239. Harvesting and Handling Apricots and Plums for Eastern Shipment.
- 240. Harvesting and Handling Pears for Eastern Shipment.
- 241. Harvesting and Handling Peaches for Eastern Shipment.
- 242. Poultry Feeding.
- 244. Central Wire Bracing for Fruit Trees.
- 245. Vine Pruning Systems.
- 247. Colonization and Rural Development.
- 248. Some Common Errors in Vine Pruning and Their Remedies.
- 250. Measurement of Irrigation Water on the Farm.
- 251. Recommendations Concerning the Common Disease and Parasites of Poultry.
- 252. Supports for Vines.
- 253. Vineyard Plans.
- 254. The Use of Artificial Light to Increase Winter Egg Production.
- 255. Leguminous Plants as Organic Fertilizer in California Agriculture.
- 256. The Control of Wild Morning Glory.
- 257. The Small-Seeded Horse Bean.
- 258. Thinning Deciduous Fruits.
- 259. Pear By-products.

Any of the above publications may be obtained by addressing
THE DIRECTOR, AGRICULTURAL EXPERIMENT STATION,
UNIVERSITY OF CALIFORNIA, Berkeley, California.

The Agricultural Department of the Chamber of Commerce

This department specializes in giving aid to the newcomer who, unacquainted with Southern California and local conditions, would buy a small ranch need only to apply to Dr. George Clements, Secretary of the Agricultural Department of the Los Angeles Chamber of Commerce. You will then be guided aright, and may be saved the embarrassment of a costly mistake.

To the newcomer looking for a home, we advise you to consult or write the Agricultural Department of the Los Angeles Chamber of Commerce.

Agricultural Journals

For a small annual subscription you may get the following Agricultural Journals, all published in Los Angeles, California, except the Pacific Rural Press:

California Cultivator, weekly; \$1.00 per year.

Farm and Tractor, weekly; a part of the **Los Angeles Times**.

The California Farmer, semi-monthly; \$1.00 per year.

Pacific Rural Press, weekly; \$1.00 per year (San Francisco).

These Journals put before you in an interesting way all the agricultural news up-to-date. They publish reports of commodities which are highly instructive, and very often the information you need. Read them carefully and you will find in season many solutions to your daily trouble. The advertising columns may sell your products or show you where to buy.

Send at once for one or more of these journals; they are too valuable to ignore.

THIS SEED CATALOGUE

Once a year this Seed Catalogue comes to your home, a friendly visitor. Its illustrations reveal to you by actual photograph the results you can get from the seeds offered. Its cultural instructions are so explicit that even the inexperienced may succeed.

The general information to be found throughout this catalogue is suggestive as to what varieties are to be planted in the proper season, or for various markets, or for various uses. If you would have a good garden or if you would be a successful gardener, read this seed catalogue. See the pages concerning fertilizers, insecticides, garden tools, etc. If you would have further agricultural information not found in this catalogue, write or consult us.

Do not overlook the pages of Bee Supplies, Canaries, Gold Fish, Food and Remedies for Poultry and Pet Animals.

To the New Comer or Beginner

For thirty years we have studied the cultural methods of hundreds of the most successful gardeners and ranchers as well as the methods of the unsuccessful. We have had at all times a demonstration garden where we have tried out many varieties that have proven unsuited to the conditions of the Southwest, thereby sparing our growers much aggravation and financial loss by withholding from them the things that were sure to fail, and we have put before them many varieties of great value to the Southwest.

At much expense for your benefit we have printed into this book about all the cultural instruction that an amateur may need. This catalogue comes to you as an instructor and an advisor. Its pages contain the information you want or tells you where it may be found. The advice given is dependable and if any agricultural question arises that is not answered in this catalog, write us that we may help you to the answer.

Do You Want This Catalog?

Be sure and send us an order for seeds if you want this catalog next year. If you do not send us an order your name is taken from our mailing list, believing you have changed your address, or you may have come to the store, where you can get a catalog at the counter. We prefer to have you on our list as an annual mail order customer; then you will always get our catalog as soon as it comes from the press.

WHEN YOU CHANGE YOUR ADDRESS NOTIFY US* IF YOU WANT THIS CATALOG

What Others Say

"We have just received your Annual Catalogue for 1923, and it has afforded us great pleasure to go over it. It is a grand piece of work, very complete in every way, and we want to congratulate you on the production of it. We have received many catalogues but for attractiveness and catchitiveness, yours is far the best."

ATASCADERO HARDWARE CO.

"Please send me your seed catalogue for 1923. I saw one last year and thought it the most helpful of any I had ever seen."

MRS. H. M. BALDWIN, California.

"I have not as yet received your 1923 catalogue. It is too good to miss. I want to order from it."

MISS ELLEN T. FRIEND, Alabama.

"If you can spare me a 1923 catalog, I would appreciate it very much. Your seeds have always proven satisfactory and of the best varieties."

E. A. RHINESMITH, California.

Service

When we started in business in 1893, Agriculture was not considered one of the sciences. We had no college of Agriculture at Davis, no get-together conventions for co-operative education. Each grower learned his lessons from hard personal experiences. A few progressives subscribed for agricultural papers and read them.

The Seed Catalogue was authority for some general instructions but it remained for the A & M Seed Co. to systematically search for the varieties of vegetables best suited to local soil and climate conditions, to give cultural instructions best suited to each condition of soil, to advise concerning insecticides and fertilizers.

The popular vegetables annually shipped out of Southern California and the cultural methods so uniformly accepted are wonderful evidence that the work of the A & M Seed Co. was well done.

The up-to-date methods of building for success have always been advocated and advanced by us. We were first among seedsmen to advocate the use of Nitrogen Bacteria which is now considered essential to successful agriculture. We were first to advocate the Campbell Dry Farming Methods, that is now called scientific dry farming; first to offer certified seed potatoes and first to introduce into California vetch for green manuring and later we were first to commercialize Melilotus Indica for the same purpose.

Our experiments with plants from foreign sources have resulted in demonstrating the futility of introducing some and the value of others.

We had demonstrated in 1901 that neither the Arabian Alfalfa nor the Siberian Alfalfa were profitable to grow here; and we refrained from offering either until 1910 the Department of Agriculture recommended them.

Two seasons proved that we were justified in keeping them out, that they were not suited to our local conditions.

We have for a number of years advocated sowing Melilotus Alba on the alkali and water-logged lands lying east of Compton and about Clearwater. A drive through this section during the month of August will reveal to the observer that much of this section is now over-run with Melilotus Alba, much to the advantage of the dairymen.

For two years we have advocated Rhodes Grass for alkali soils. We have reports of wonderful results and some failures. We are sure that some failures are due to the fact that the first crop was not allowed to mature its seed for whenever it is allowed to re-seed itself it thrives.

SUGGESTIONS FOR A CALIFORNIA GARDEN ON A CITY LOT

You have just moved into a new home of your own; you have not much time for gardening, yet you wish to get the most out of the small space. Read in this catalog about the preparation of the soil, then purchase A. & M. seeds according to the season. Plant seeds properly and with ordinary culture you will be eating radishes within three weeks, followed in succession by green onions, cucumbers, spinach, beans, beets, lettuce, carrots, sweet corn, peppers, and tomatoes. Have a few plants of rhubarb, a bed of asparagus about 10'x10' will afford enough for a small family. Plant spinach and rhubarb in shady places. If you have a city lot, plant a garden; you can grow \$100.00 worth of better vegetables than you can buy.

Read

This Catalog comprises a list of all vegetables and farm seeds offered by us, all of which have been tried and proven to be adapted to climatic conditions of the Southwest and Mexico. BUT always have in mind that each season, even each month requires not only different varieties of seed, but different strains of the various varieties. For instance, Los Angeles Market Lettuce is the best of all when planted from August 1st to February 1st, but planted at other times is very inferior, while Romaine and Iceberg Lettuce are best suited to the Summer months. This applies only to the climate of the Southwest. What is true of lettuce will apply also to beans, melons, onions and many other vegetables.

Thus by years of attention to this work we have classified each variety of vegetable according to its best adaptation with regard to soil and climate. The result is that our growers have fewer crop failures.

QUICK SERVICE

We aim to give the best service possible at the counter, and in order to do so we must ask your co-operation to the extent that you will have your order ready when you come into the store.

During the planting season there are many customers waiting, and competent clerks are scarce. It is for your protection that we have only experienced seedsmen behind the counter; therefore, be considerate and have your order ready.

OUR CALL DESK

This has proven to be just what was needed to round out the efficiency of our retail store. Anyone contemplating a trip to town may now write or phone their order and it will be ready for them at the call desk when they ask for it.

Leave your order when you come to town. It will be ready when you call for it.

"Please send me your 1923 catalogue. It contains so much valuable information, I want to keep it for reference."

F. POLLARD, Utah.

OBITUARY

Died July 17th, 1923.

Edward J. Wickson, A.M. who at the time of his death was Professor Emeritus of Horticulture in the University of California and Editor of the Pacific Rural Press.

California has lost one of her most indefatigable workers in the interest of California Horticulture and Agriculture. His books are standard authority and are monuments to his usefulness and silent witnesses to the laborious task he had chosen and to the thoroughness with which he has accomplished that task. Mr. Wickson was truly one of the world's noble men.

What We Have Done and are Now Doing for the Great Southwest

Since 1893 we have made a systematic effort to study the soil and climatic conditions as they pertain to their influence over agricultural crops, both beneficial and detrimental and by what methods we could obtain the greatest benefits and least harm to our growing crops.

By this research much has been discovered that was not before generally known concerning cultural methods, and the adaption of varieties and the creation and introduction of new varieties suitable not only to the various conditions of soil and climate but suitable also for the various phases of the market. The vegetable vender, the shipper and the canner.

The information that we have gathered from year to year was given to our patrons through the distribution of our annual catalogue and special circulars.

The discoveries of new and better vegetables were introduced to the grower by means of the catalogue with all information concerning it.

Notwithstanding our research had no definite nor intelligent direction, note what we have accomplished.

In the way of culture we have standardized the planting of double rows on ridges. The advantages of this method are: earliness, cleanliness, economy in irrigation, and culture, also a better quality of vegetables.

We have been largely instrumental in spreading the education of modern irrigation methods.

We discovered the California Pearl Cauliflower, a local creation, and introduced it in 1900. Since that time it is the most popular variety throughout the Southwest.

More than 7,000 acres of this cauliflower are grown in California annually.

In 1901 we introduced the White Rose Potato which is now grown in Southern California more extensively than any other variety.

We discovered the Hybrid Casaba, a local creation, and introduced it in 1902 and the Golden Beauty Casaba in 1908. Several thousand carloads are shipped each season.

After several years of experimenting we introduced the Los Angeles Market Lettuce in 1903. In 1906 we successfully shipped the first crate of lettuce from California to the far East. Twenty-five thousand car loads are now shipped annually, reaching every large city in the United States. It requires about 1,000 acres to grow the annual supply of seed.

The Anaheim Chili, a local creation, was discovered, improved, and introduced by us in 1904 and the Pimiento in 1910. Many canners are now doing an enormous business canning these peppers.

We discovered and introduced the Chilian Watermelon during 1900, the Angelino during 1907 and the Klondike discovered by Dr. Geo. P. Clements we introduced in 1909. These three watermelons are local creations and the most popular in all the Southwest.

The First Early Tomato is the most popular early variety and the biggest money maker, was introduced by us in 1905.

Without these introductions, Los Angeles County could not now be the richest agricultural county in the United States.

Now Being Done by Intelligent Supervision

With definite aim and intelligent direction this work of improving and standardizing existing vegetables is now pursued by the State College of Agriculture at Davis under the supervision of Dr. Henry A. Jones, assisted by I. T. Rosa, Jr., and Prof. E. B. Babcock. After a few years of commendable work, we will have standard types which means that the growers of the future will produce more and better vegetables.

Read This Catalog!

Following the proper preparation of the soil every farmer should have reliable seed to further insure success. We aim to give the farmer seeds that can be relied upon to make success complete.

Success is more certain if the seed be selected to suit the soil, season and purpose. This catalog will help you make the proper selection.

"I received your catalog and must say it has quite a lot of information on gardening that most of us need and I think is appreciated. Thanks very much."

J. O. L. CARMODY, Texas.

Read

Proper culture with favorable soil and climate will produce a normal type and quantity of any variety of vegetable.

Proper culture may bring good results with unfavorable soil, but culture can accomplish little against an unfavorable climate.

A rich sandy or sandy loam soil with sufficient water available at all times is the easiest soil to cultivate, it is just like play and all vegetation comes just like the picture in the catalogue. A clay or adobe soil requires a real training in order to handle it intelligently. When irrigated it must be worked and pulverized and planted just at the right condition or trouble will follow throughout the growing period and with all the increased trouble an unsatisfactory crop will be the result.

A soil of decomposed granite with clay must be handled about the same as adobe.

All gardeners at all times should arrange their furrows or plant their rows to follow the contour of the garden so that when irrigated the water will be as nearly on the level as possible. A too rapid flow will carry the fertilizer and humus by the plant to the lower end of the garden. Adobe or decomposed granite, pack so hard that water cannot penetrate to the center of the row to the mass of roots even though run all day long, therefore the vegetation cannot thrive. This is probably the most frequent case of failure.

Another mistaken idea that causes many failures is the thought that a light sprinkling each day is enough. If after you have finished sprinkling you would investigate, you will find that the moisture has penetrated no deeper than one inch and that the main roots are in dry hard soil, they get no benefit from the sprinkling. Your vegetation suffers and you do not suspect the cause. About once in two weeks you should make trenches or a basin or loosen the plant bed with a spading fork so that the soil will be soaked to the depth of several feet. Then only can your plant thrive with the additional sprinkling when needed. When the atmosphere is colder than the water do your sprinkling in the morning. When the atmosphere is warmer than the water do your sprinkling in the evening.

Unfavorable climatic conditions cause more crop failures than anything else. A grower may be an expert and bring his crop successfully to the mature stage. A few days of excessive moisture and low temperature will destroy the entire crop.

A professional grower may transplant a field of tomatoes or sweet potatoes, do it properly, but in a few days of excessive heat may destroy every young plant. A field of beans or cucumbers may be entirely destroyed by blight and even trained experts cannot explain what atmospheric condition caused the blight and can give no formula to avoid this destruction.

Insects are a source of much loss. It is a difficult task to prevent their destruction but there is always some remedy against insects. See pages in this book concerning insecticides.

The Question of Manure

Stable manure is no longer available for the small gardener or for general application about the home garden.

The best substitute for manure to apply in the garden to be spaded under is bean or alfalfa straw, and in larger gardens where you would wish to plant a cover crop for green manuring but do not have time to await results we recommend bean or alfalfa straw.

For a surface dressing or mulch for covering newly planted seeds in order to retain moisture, or to prevent clay soils from baking, or to mix in soils for potted plants, etc., we recommend Alfalfa Meal with the caution that it be well mixed with the soil and applied not too liberally least it may mould or heat.

Both bean straw and alfalfa meal are easily available, clean and without offensive odor. Where green manure like this is used a light application of lime is advised.

SUGGESTIONS FOR THE SMALL GARDEN THINGS NOT GENERALLY KNOWN

No plot of ground is too small for a garden, whether for vegetables or flowers. There are some varieties particularly suited to your little plot and will thrive to be a source of pleasure and satisfaction.

Do not be fearful of wasting seed when planting Lettuce, Beets, Chard, Turnips and Onions for the reason that the rows may be thinned to the proper distance and the young plants that are removed make excellent early greens for the table.

We believe it is unnecessary and confusing to have a long list of varieties from which it would be difficult to select what you want. We have taken upon ourselves the privilege of selecting for your guidance those varieties that are best suited to the climatic conditions of the great Southwest and to the market for which they are intended.

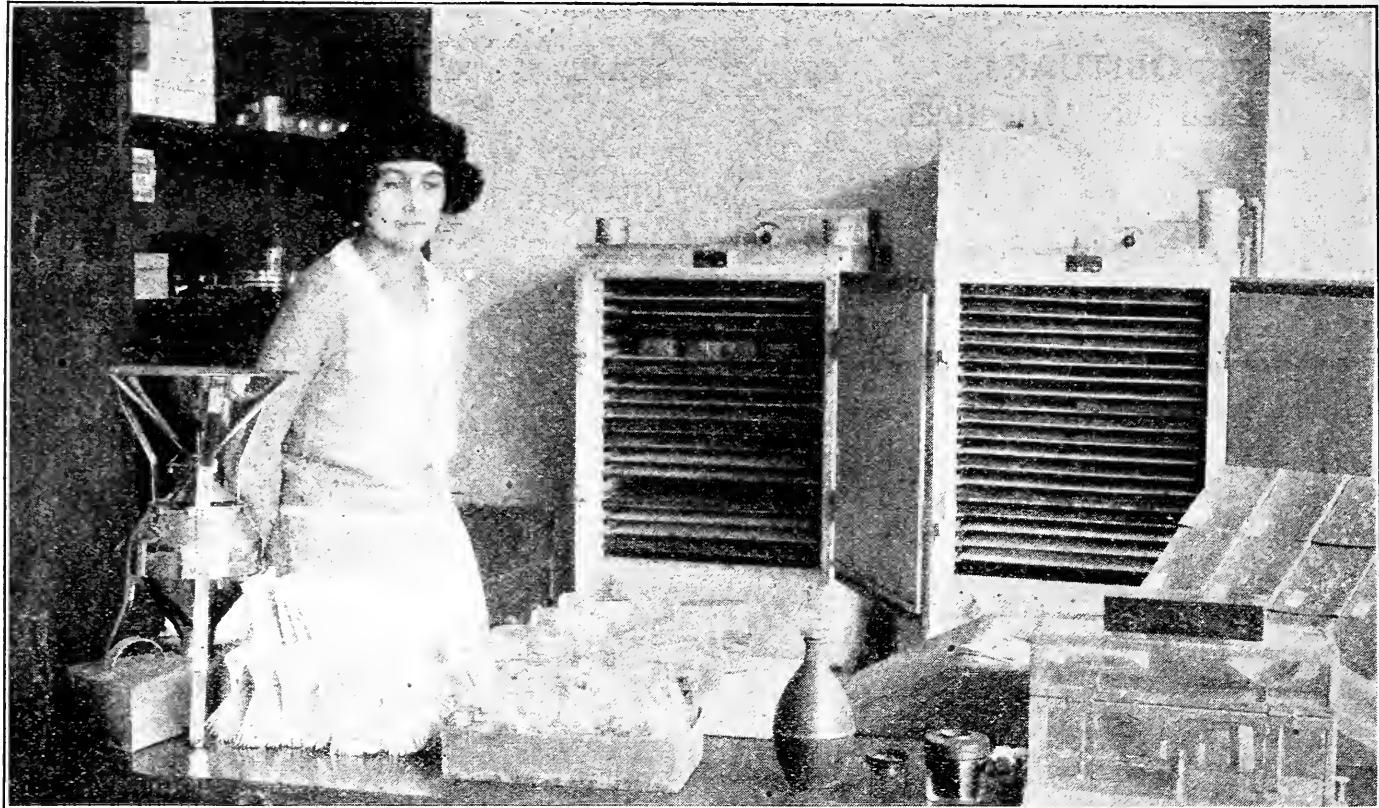
Every variety listed in this catalogue is the best for the purpose intended. If you will read the instructions you will be able to select just what you should have.

When planting a small garden you will find that a packet of seed is sufficient for one planting, usually enough for a row of 20 feet.

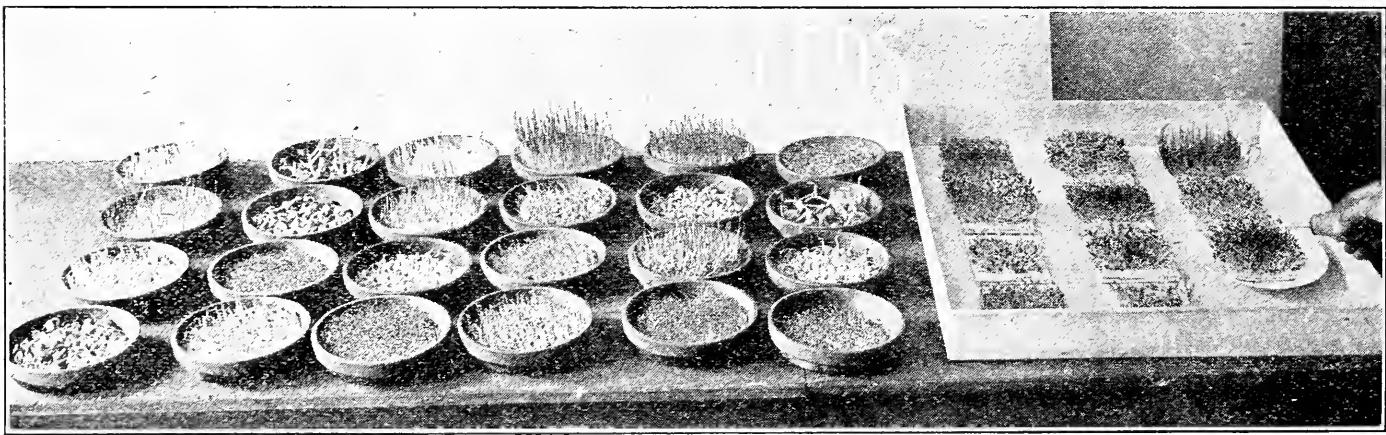
When buying seeds the grower rarely gives credit to the seedsman for the clean seed and high germination. Seedsman are just as careful about the purity of the seed, but too often they must depend upon the integrity of growers over whom they can have no control and whose crops cannot be inspected.

The A & M Seed Co. have a record on file of every sale by mail and every sale delivered to market gardeners, amounting to more than one hundred thousand sales per year. We receive hundreds of complimentary letters, but it is rarely that we receive a complaint about the quality of the seeds we send out. Usually the cause of failure is traced to improper culture, lack of moisture, impoverished soil or unseasonable planting.

The experienced gardener understands the unfavorable conditions and often corrects them, thus avoiding a crop failure. It is the inexperienced grower who fails. It is for these that so much space in this catalogue is given to cultural instruction,



Miss Vera Park, trained in seed analysis at the Dominion Seed Testing Laboratory at Calgary Alberta, Canada.



A Laboratory Test Shows that Our Seeds Germinate

WHAT WE ARE DOING TO SAFEGUARD OUR PATRONS FROM DISAPPOINTMENT AND LOSS

As soon as any seed is received a laboratory test is made for germination and purity and if found wanting in germination the seed is not accepted. If unclean it is at once recleaned.

At our trial grounds a sample of all vegetable seed is planted to test if it will grow true to type.

Our cleaning facilities are of the very best.

All of our California grown crops are inspected by us during the growing period in order to detect any impurities or off types.

Throughout this catalogue, cultural instructions and hints are given that if heeded, success is assured if cultural methods conform with the requirements of the soil.

This Laboratory is maintained all the year round safeguarding the grower against weeds, and seeds of low germination. It is managed by Miss Vera Park who graduated as a seed analyst. Note at the rear of the picture are two test germinators, at the left is a seed mixer to secure an equal and a fair sample, at the right of the table is a scales that will register a weight as small as 1/200 part of a gram. Back of the scales is a tray of blotters with seeds that have sprouted.

THE HOME GARDEN Is the Nation's Greatest Asset

It has often been said, "A man in his own home is a contented man." We would revise this statement to read, "A Man In His Own Home Garden Is a Contented Man." The man without a garden may be seen at the baseball game, or on the golf-links, or joy riding, or engaged in some other way or getting recreation and exercise at more or less expense, and with some regret; but the man with a Home Garden gets more joy, more recreation and exercise at no expense, no regret, but always some reward in the supply of good fresh vegetables, beautiful flowers, a home to be proud of, and a comfortable bank account with the money saved.

Figure it out for yourself: It is a very conservative estimate that every home garden fifty feet square can by intelligent tillage produce \$100.00 worth of vegetables each year. One hundred thousand gardens in the city of Los Angeles can easily produce \$10,000,000 worth of good healthy food and give good healthy exercise, recreation and contentment, to 500,000, or more, people, and save another \$10,000,000, or much more, annually, of money that would be spent seeking exercise and recreation of doubtful pleasure that is often followed by regret.

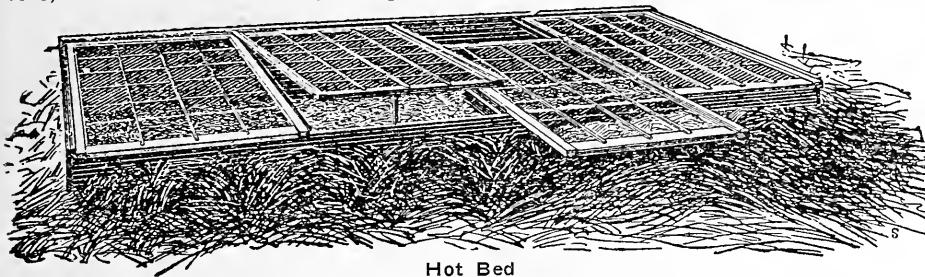
If these figures apply to the city of Los Angeles alone, what gigantic total would be summed up for the nation.

The small home garden should give healthful exercise, produce good food, reduce the cost of living, and save money for millions of contented people.

Yes, THE SMALL HOME GARDEN is the Nation's greatest asset, and within the reach of all.

The Primer of Agriculture

The instructions on this page and next are so essential to the amateur and the new-comer that we repeat them from year to year. But each year brings out some new phase of agriculture, much of which we include in these columns; therefore, the reader will find something worth while that did not appear in last year's



Hot Bed

Every garden should have a hot bed in a sunny corner for the purpose of raising plants for early vegetables.

Dig a trench east and west twelve to eighteen inches deep. A bed three feet wide and ten feet long is large enough for any family garden. Board twelve inches high on the south side and 18 inches on the north side. Fill twelve inches deep with straw, manure or weeds, moisten slightly, pack tightly, cover three inches deep with sandy loam; if the loam is mixed with some A. & M. Humus or leaf-mould, it will greatly improve it. 5 lbs. of sheep manure and 1 lb. each of Toro sulphur and lime would fertilize the hot bed and do much toward destroying fungus and insects. Sow the seed in rows across the hot bed north and south, so that the sun will light both sides of the row during the day, making strong, healthy plants. Do not sow too thickly nor more deeply than one-fourth inch. Cover the hot bed with glass, not muslin. No less than twelve inches should exist between the glass and the soil. Sprinkle sufficiently to moisten the soil, but not enough to cool the manure, which would then become chilled and be worse than no manure at all. Raise the glass during the day, and close at night. Without ventilation the plants may be scalded during a warm sunny day. Before transplanting from the hot bed, all plants should be hardened by exposing them to the sun for several days. Exercise proper judgment lest they be destroyed.

THE SOIL

There are two kinds of soil in California that baffle the new gardener, and often puzzle the man of experience. One kind is the raw, unreclaimed soil that packs so hard that vegetation cannot take root. The other soil is as pliable as sand, and ought to grow anything but just will not. Both require the same solution. They need life (humus) and there is nothing better to put life into soil than a green manuring crop plowed under at the right time, and to thoroughly air the soil by cultivation.

For your garden gather weeds and dig them under. Any decaying vegetation plowed under will add humus. For the field, grow rye, vetch, melilotus, or barley during the winter months, and in the spring plant Hubam Clover and Cow Peas. All these crops will furnish feed for the stock as well as humus to the soil. Cover crops for green manuring should be plowed under a month before planting and before sowing any seed the field should be thoroughly irrigated and cultivated. If this is not done a dry crust will form over the humus because of the air space formed by the humus.

To grow well a plant requires a deep, mellow, moist, soil, supplied with the right amount of air, heat and available plant food. An important step, then, in the successful growing of vegetables is to prepare the soil in such a way that it will be congenial to the best root growth. The soil for truck crops is a rich sandy loam—a soil containing varying proportions of clay, sand and organic matter. A good garden soil can be made in most back yards by intelligent management, and an application of two pounds each of Toro Sulphur and lime to every 100 square feet.

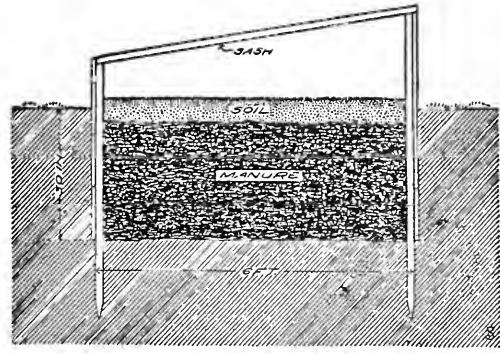
Clay and Adobe Need Skill

Of all the garden soils, clay is the most easily injured by tilling when it is not in the right condition as to moisture. If worked too wet, the particles all slide together into a compact mass. On the other hand, if worked too dry, the clods are hard to break. When clay soil is in the right condition to work it will crumble apart if squeezed in the hand. If it sticks together it is too wet. Clay soil should never be worked when it is wet, not even with a hoe. This is an important lesson for all gardeners.

In a deep, mellow soil, the plants grow more quickly, since larger root systems can be developed and more food and moisture absorbed. A deep, mellow soil affords a larger reservoir to hold rain needed during the droughts that come in the growing season. Such a soil is warmer and contains air needed for the growing roots and for the bacteria that cause decay of organic matter or gather nitrogen from the soil air.

A Compost Pit

Make a pit about 12 inches deep in some out-of-the-way place in the home garden. Put into it every particle of vegetation that will decay. When cleaning up burn only sticks that will not decay readily, but put the ashes into the pit with the compost. Turn the compost over with a fork and sprinkle with water whenever it shows signs of heating. This compost is valuable fertilizer, therefore do not neglect the Compost Pit.



Hot Bed, Cross Section

A Word About Sowing Seeds

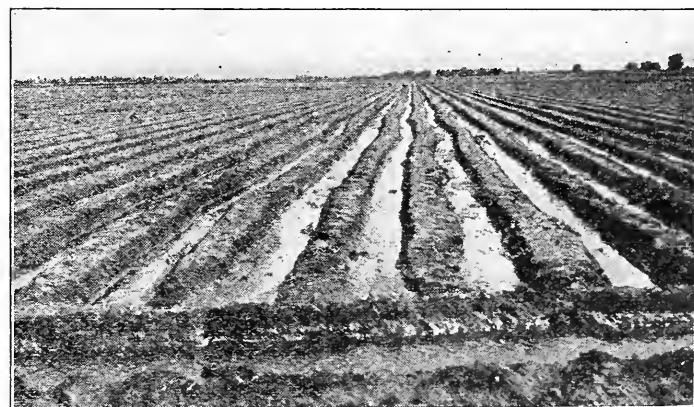
Many seeds are small and the germination weak, therefore sow them very shallow, often not more than one-eighth inch deep. This is because the germ or sprout must have air and light. If this is denied by too deep sowing, it dies before it reaches the surface. Cover the seed with A. & M. Humus.

In order to assist small or weak seeds to grow, it is advisable to plant plentifully, because the many seeds will give strength to raise the soil where one seed could not do so.

This advice applies particularly to beet and melon seeds, but it is applicable to all small seeds. It is easy to thin out the surplus plants. A good general rule is to plant seeds to a depth equal to from three to five times their diameter, make ridges to stand about six inches high, flattened to about ten inches wide on top and twelve inches between ridges. Drill the seed or transplant on each side of the ridge. Irrigate in the furrow between the ridges. By this method two rows are irrigated with one furrow. It is easy to see the advantage of this method over the usual way of drilling on level ground and irrigating each row, often flooding the plant, which is harmful, particularly during the heat of the summer. (See illustration.)

A Few Words About Irrigation

In seed beds where small seeds are sown thickly, it is necessary to sprinkle the beds, never flood them. During the winter months, sprinkle only in the morning when the water is warmer than the dew. This allows all the heat that accumulates in the soil during the day to be retained far into the night. During the hot summer months, it will be necessary to sprinkle in the evening to revive the plants after a hot day.



Irrigating Sweet Potatoes or Other Crops

When making a garden, whether for drilling or planting seed, or setting plants, always wet the ground thoroughly. GIVE IT A GOOD SOAKING DOWN TO SUB-MOISTURE. As soon as it is tillable—that is, as soon as it can be spaded and pulverized, or when the soil will not stick to the spade, dig it 10 or 12 inches deep. Pulverize the soil thoroughly and rake it evenly. While it is still moist, plant seed from $\frac{1}{4}$ inch to one inch deep, in heavy soil, and a little deeper in sandy soil. Planted this way, almost any variety of seed will germinate and show above the ground in from four to ten days, with irrigation. Never sprinkle in a new garden before the plant is above ground, nor after if you can irrigate between the rows. It is far better to irrigate than to sprinkle, and much less labor. Always mulch the soil after each irrigation, as soon as it mulches readily, but no sooner. To allow the soil to bake after irrigation is far worse than no irrigation at all.

To sprinkle the garden slightly each day during the summer months is of little value unless the ground is also thoroughly irrigated once each week or two, according to the nature of the soil. Slight sprinkling refreshes the foliage, but may not penetrate the soil more than one inch deep. Thus as the under soil dries, the roots get no moisture. The plants suffer, and you do not suspect the cause because you sprinkle each day. This is a common fault and the cause of many failures.

Owing to the diversity of the soil and climatic conditions of the great Southwest, it is impractical to follow without some deviation any table that might be formulated. We believe this table is as nearly correct as any table can be made, yet the time of planting must vary with each season, and so seldom are the seasons at all similar that there is always an element of risk for the man who plants early. Each month, too, requires certain varieties best suited to the season and purpose for which it is planted.

VEGETABLE CALENDAR FOR THE HOME GARDEN

VARIETY	NO. OF PLANTS PER OUNCE OF SEED	SEED FOR 50 feet	ROWS APART	APART IN ROWS	TIME OF PLANTING	READY FOR USE
Artichoke.....	200	12 plants	4 ft.	4 ft.	Dec. to April	5 mo.
Asparagus.....	150	50 roots	20 in.	1 ft.	Dec. to April	2nd spring
Beans, Bush.....	50 to 100	2 pkts.	2 ft.	6 in.	March to Sept.	8 to 12 wks.
Beans, Pole.....	50 to 100	2 pkts.	3 ft.	12 in.	April to Aug.	10 to 12 wks.
Beans, Lima.....	30 to 60	1/4 lb.	2 ft.	10 in.	April to Aug.	12 to 14 wks.
Beets.....	300	1 pkt.	10 in.	6 in.	All year	10 to 12 wks.
Cabbage.....	2000	36 plants	20 in.	15 in.	All year	14 to 16 wks.
Carrot.....	1500	1 pkt.	10 in.	Sow	All year	8 to 10 wks.
Cauliflower.....	2000	30 plants	20 in.	18 in.	Sept. to March	14 to 16 wks.
Celery.....	.....	100 plants	20 in.	6 in.	March to Aug.	16 to 18 wks.
Corn, Sweet.....	100	1 pkt.	2 ft.	18 in.	March to Aug.	10 to 12 wks.
Cucumber.....	200	1 pkt.	4 ft.	3 ft.	March to Sept.	10 to 12 wks.
Endive.....	1000	1 pkt.	1 ft.	10 in.	Sept. to March	14 to 18 wks.
Eggplant.....	500	24 plants	2 ft.	2 1/2 ft.	April to July	10 to 12 wks.
Kale.....	1000	30 plants	2 ft.	18 in.	All year	8 to 10 wks.
Kohlrabi.....	1000	1 pkt.	10 in.	Sow	All year	10 to 12 wks.
Lettuce.....	200	1 pkt.	15 in.	10 in.	All year	12 to 16 wks.
Musk Melon.....	200	1 pkt.	4 ft.	3 ft.	March to July	14 to 18 wks.
Water Melon.....	100	1 pkt.	6 ft.	4 ft.	March to July	15 to 20 wks.
Okra.....	150	1 pkt.	2 ft.	18 in.	April to July	10 to 12 wks.
Onion Seed.....	500	1 pkt.	10 in.	Sow	All year	24 to 28 wks.
Onion Sets.....	.....	1 lb.	10 in.	3 in.	All year	14 to 18 wks.
Parsnips.....	300	3 lb.	2 ft.	Drill	Aug. to March	14 to 18 wks.
Parsley.....	400	1 pkt.	10 in.	Sow	All year	12 to 14 wks.
Pepper.....	1000	30 plants	20 in.	18 in.	April to July	10 to 12 wks.
Potatoes.....	.....	5 lbs.	2 ft.	1 ft.	March to Aug.	10 to 14 wks.
Sweet Potatoes.....	.....	50 plants	3 ft.	1 ft.	April to July	10 to 12 wks.
Pumpkin.....	100	1 pkt.	6 ft.	5 ft.	April to July	12 to 14 wks.
Peas.....	50	1/4 lb.	2 ft.	Sow	Sept. to March	14 to 20 wks.
Radish.....	500	1 pkt.	10 in.	Sow	All year	4 to 8 wks.
Rhubarb Roots.....	.....	24 roots	3 ft.	2 ft.	Dec. to March	8 to 10 wks.
Roselle.....	150	1 pkt.	3 ft.	2 ft.	April to May	18 to 20 wks.
Salsify.....	200	1 pkt.	10 in.	Sow	Sept. to March	14 to 18 wks.
Spinach.....	200	1 pkt.	12 in.	Sow	Sept. to April	8 to 12 wks.
Squash, Summer.....	100	1 pkt.	3 ft.	3 ft.	April to Aug.	10 to 12 wks.
Squash, Winter.....	100	1 pkt.	6 ft.	4 ft.	April to Aug.	12 to 16 wks.
Tomato.....	1000	18 plants	4 ft.	3 ft.	March to Aug.	12 to 14 wks.
Turnip.....	2000	1 pkt.	10 in.	Sow	Sept. to March	10 to 12 wks.

The soil should be moist enough at time of planting to germinate the seed without irrigation. The depth of planting in heavy soil should be from $\frac{1}{4}$ in. for very small seed to 1 in. for beans and peas, in sandy soil the seed may be planted from $\frac{1}{2}$ in. to 2 inches.

In frostless sections the time of planting summer crops may be advanced a full month.

VEGETABLE CALENDAR FOR FIELD PLANTING

VARIETY	SEED PER ACRE	ROW APART	APART IN ROW	WHEN TO PLANT	TIME TO MATURE	APPROXIMATE YIELD AND VALUE PER ACRE
Artichoke.....	1 lb.	5 ft.	4 ft.	Oct. to Jan.	18 to 20 wks.	
Asparagus—roots.....	1'000	4 ft.	1 ft.	Dec. to Feb.	1 year	
Asparagus, seed.....	3 lbs.	2 ft.	Drill	Feb. to March	2 years	
Beans, bush.....	40 lbs.	2 ft.	Drill to 6 in.	March to Aug. 1st	8 to 12 wks.	3 tons \$300
Beans, pole.....	30 lbs.	3 ft.	12 in.	April to July 1st	10 to 12 wks.	4 tons 400
Lima, bush.....	50 lbs.	3 ft.	Drill to 6 in.	April to Aug. 1	10 to 12 wks.	4 tons 400
Lima, pole.....	40 lbs.	3 ft.	12 in.	April to Aug. 1	12 to 14 wks.	4 tons 400
Beets, table.....	10 lbs.	Double row	Drill	All Year	10 to 12 wks.	12 tons 400
Beets, stock.....	7 lbs.	16 in.	Drill	Oct. to May 1	14 to 18 wks.	20 tons 200
Carrots, table.....	3 lbs.	Double row	Drill	All year	10 to 12 wks.	12 tons 300
Carrots, stock.....	4 lbs.	16 in.	Drill	Oct. to May 1	12 to 18 wks.	18 tons 200
Cabbage, plants.....	8000	30 in.	18 in.	All year	14 to 16 wks.	12 tons 200
Cabbage, seed.....	5 oz.	8 in.	Drill	All year	20 to 26 wks.	12 tons 200
Cauliflower, plants.....	7000	3 ft.	2 ft.	May to Feb. 1	14 to 16 wks.	500 doz. 250
Cauliflower, seed.....	5 oz.	8 in.	Drill	May to Feb. 1	20 to 24 wks.	
Celery, plants.....	30,000	30 in.	6 in.	March to Aug. 1	16 to 18 wks.	
Celery, seed.....	1/4 lb.	8 in.	Drill	March to Aug. 1	24 to 26 wks.	2000 doz. 600
Corn, Sweet.....	10 lbs.	30 in.	18 in.	March to Aug. 1	10 to 12 wks.	400 box 150
Cucumbers.....	2 lbs.	4 ft.	3 ft.	March to Sept. 1	10 to 12 wks.	600 box 200
Chicory—Endive.....	2 lbs.	Double row	Drill and thin to 10 in.	Sept. to Feb. 1	14 to 18 wks.	2000 doz. 600
Eggplant, plants.....	7,000	3 ft.	2 ft.	April to July 1	10 to 12 wks.	
Eggplant, seed.....	1/4 lb.	Hot bed	8 in.	Dec. to Feb. 1	18 to 20 wks.	10 tons 600
Kale.....	1/2 lb.	3 ft.	Drill	Sept. to March 1	8 to 10 wks.	
Kohl Rabi.....	2 lbs.	Double row	Drill	Sept. to March 1	10 to 12 wks.	12 tons 300
Lettuce.....	2 lbs.	Double row	Drill and thin to 10 in.	All year	12 to 15 wks.	500 crates 500
Musk Melon.....	1 lb.	6 ft.	5 ft.	March to July 1	14 to 18 wks.	400 crates 200
Water Melon.....	1 lb.	9 ft.	8 ft.	March to June 1	16 to 20 wks.	15 tons 150
Casaba.....	1 lb.	8 ft.	8 ft.	March to July 1	16 to 20 wks.	12 tons 300
Okra.....	6 lbs.	3 ft.	18 in.	March to Aug. 1	10 to 12 wks.	400
Onion Seed.....	2 lbs.	Double row	Drill	Sept. to April 1	24 to 28 wks.	200 crates 200
Onion Sets.....	250 lbs.	Double row	4 in.	Dec. to Feb. 1	14 to 18 wks.	600
Parsley.....	4 lbs.	Double row	Drill	Aug. to April 1	12 to 14 wks.	400 sks. 200
Parsnip.....	5 lbs.	2 ft.	Drill	Aug. to March 1	14 to 18 wks.	4 tons 400
Peas.....	50 lbs.	3 ft.	Drill to 6 in.	Sept. to March 1	14 to 20 wks.	
Pepper, plant.....	9,000	3 ft.	18 in. or drill seed in. field and thin to 18 in.	April to June 1	10 to 12 wks.	
Pepper, seed.....	1 1/2	Hotbed	1 ft.	Jan. to April 1	18 to 20 wks.	10 tons 200
Potatoes, Irish.....	600 lbs.	3 ft.	1 ft.	Feb. to Sept. 1	10 to 14 wks.	100 sks. 150
Potatoes, Sweet, plants.....	12,000	3 ft.	1 ft.	April to July 1	10 to 12 wks.	150 sks. 300
Potatoes, Sweet, seed.....	400 lbs.	Hotbed	1 ft.	Jan. to Feb. 1	18 to 20 wks.	20 tons 100
Pumpkin.....	1 lb.	10 ft.	10 ft.	April to July 1	12 to 14 wks.	400
Radish.....	12 lbs.	Double row	Drill	All year	4 to 8 wks.	
Rhubarb, roots.....	5,445	4 ft.	2 ft.	Sept. to April 1	8 to 10 wks.	8 to 10 wks. 500
Rhubarb, seed.....	1/2 lb.	Double row	Drill	Jan. to April 1	16 to 20 wks.	6 tons 150
Roselle.....	3 lbs.	5 ft.	3 ft. thin to 1 plant	April to May	18 to 20 wks.	300
Spinach.....	12 lbs.	Double row	Drill to 6 in.	Oct. to April 1	8 to 12 wks.	
Squash, Summer.....	2 lbs.	4 ft.	3 ft.	March to Aug. 1	10 to 12 wks.	12 ton 200
Squash, Winter.....	1 lb.	8 ft.	6 ft.	April to Aug. 1	12 to 14 wks.	8 tons 300
Salsify.....	6 lbs.	Double row	Drill	Sept. to April 1	14 to 18 wks.	
Tomato Plants.....	1,200	6 ft.	6 ft.	March to Aug. 1	12 to 14 wks.	10 ton 150
Tomato, seed.....	1 oz.	Hot bed, Jan.	Out door drill 10 in.	March to June 1	18 to 20 wks.	
Turnip.....	2 lbs.	Double row	Drill	All year	10 to 12 wks.	12 tons 200

CALENDAR FOR FORAGE AND GRAIN CROPS

VARIETY	SEED PER ACRE	HOW TO PLANT	YIELD OF FORAGE	YIELD GRAIN LBS.
Clover Alfalfa.....	20 lbs.....	Broadcast.....	6 to 8 tons.....	600
" Alba.....	15 lbs.....	Broadcast.....	8 to 10 tons.....	800
" Indica.....	20 lbs.....	Broadcast.....	Cover crop.....	...
" Hubam.....	10 lbs.....	Broadcast.....	Cover crop.....	600
" Burr.....	15 lbs.....	Broadcast.....	Cover crop.....	...
Grain Barley.....	80 lbs.....	Drill.....	2 to 4 tons.....	2500
" Wheat.....	60 lbs.....	Drill.....	2 tons.....	2000
" Oats.....	80 lbs.....	Drill.....	3 tons.....	2000
" Rye.....	60 lbs.....	Drill.....	...	2000
" Flax.....	30 lbs.....	Drill.....	Fibre.....	2500
" Buckwheat.....	30 lbs.....	Drill.....	Cover crop.....	1500
" Hemp.....	30 lbs.....	Drill.....	Fibre.....	2000
" Canary.....	40 lbs.....	Drill.....	...	2000
" Rice.....	80 lbs.....	Drill.....	...	3000
Corn Indian.....	8 lbs.....	Drill in rows 3 ft. apart.....	4 tons, dry.....	3000
" Ensilage.....	40 lbs.....	Drill in rows, 30 in. apart.....	20 tons.....	...
" Broom.....	6 lbs.....	Drill in rows, 30 in. apart.....	2 tons, dry.....	2000
" Pop.....	6 lbs.....	Drill in rows, 30 in. apart.....	2 tons, dry.....	2500
" Egyptian.....	6 lbs.....	Drill in rows, 30 in. apart.....	2 tons, dry.....	4000
" Milo.....	6 lbs.....	Drill in rows 30 in. apart.....	15 tons, green.....	...
Sorghum.....	8 lbs.....	Drill in rows, 30 in. apart.....	20 tons, green.....	2000
Wonder Forage.....	5 lbs.....	Drill in rows 30 in. apart.....	Cover crop.....	1500
Cow Peas.....	25 lbs.....	Drill in rows 30 in. apart.....	Cover crop.....	2500
Broad Windsor.....	100 lbs.....	Drill in rows 30 in. apart.....	1 to 1½ Bale.....	...
Cotton.....	5 lbs.....	Drill in rows 4 ft. apart.....	Cover crop.....	...
Vetch.....	30 lbs.....	Drill in rows 1 ft. apart.....	4 tons hay.....	2000
Millets.....	20 lbs.....	Drill in rows 1 ft. apart.....	...	2000
Sunflower.....	5 lbs.....	Drill in rows 3 ft. apart.....	Pasture Mixture.....	...
*Grass Rye.....	20 lbs.....	Broadcast.....	Pasture Mixture.....	...
* " Bermuda.....	20 lbs.....	Broadcast.....	Hay or pasture.....	...
" Paspalum.....	20 lbs.....	Broadcast.....	Hay or pasture.....	...
" Rhodes.....	12 lbs.....	Broadcast.....	12 tons hay.....	...
" Sudan.....	12 lbs.....	Drill in rows 1 ft. apart.....	Hay or pasture.....	...
" Harding.....	10 lbs.....	Broadcast or drill.....	Pasture.....	...
" Alfilaria.....	10 lbs.....	Broadcast.....	Pasture Mixture.....	...
" Orchard.....	25 lbs.....	Broadcast.....	Pasture Mixture.....	...
* " Red Top.....	14 lbs.....	Broadcast.....	Pasture Mixture.....	...
* " Brome.....	20 lbs.....	Broadcast.....	Pasture Mixture.....	...
* " Fescue.....	20 lbs.....	Broadcast.....	Pasture Mixture.....	...
" Smilo.....	5 lbs.....	Broadcast.....	Hay or pasture.....	...
" Kentucky Blue.....	5 lbs.....	Broadcast.....	Pasture Mixture.....	...

*—Used also for Lawns and Golf Links.

NAMES OF VEGETABLES IN FOREIGN LANGUAGES

English	French	Italian	Polish	German	Spanish	Scandinavian
Asparagus.....	Asperge.....	Sparagi.....	Sparagi.....	Esparrago.....	Asparges	
Beans.....	Haricots.....	Fagioli.....	Fasola.....	Bohnen.....	Boenner	
Beet.....	Betterave.....	Barbabietola.....	Buraki.....	Rübe.....	Roedbede	
Cabbage.....	Chou.....	Cavolo Cappuccio.....	Kapusta.....	Kopfkohl.....	Col repello.....	Kaal
Carrot.....	Carrotte.....	Carota.....	Marchew.....	Carotten.....	Zanahoria.....	Gulerod-Karrotter
Cauliflower.....	Chou-fleur.....	Cavolofoore.....	Kalafiori.....	Blumenkohl.....	Coliflor.....	Blomkaal
Celery.....	Celeri.....	Sedano.....	Selery.....	Sellerie.....	Apio.....	Selleri
Corn.....	Mais.....	Mais.....	Kukurydza.....	Mais.....	Maiz.....	Mais
Cucumber.....	Concombre.....	Cetriolo.....	Ogorek.....	Gurken.....	Cohombro.....	Agurk
Dandelion.....	Dandelion.....	Dente di leone.....	Papawa.....	Lowenzahn.....	Diente de león.....	Løvetand
Eggplant.....	Aubergine.....	Petronciano.....	Gruszka.....	Eierpfanze.....	Berengena.....	Eqplante
Endive.....	Chicoree.....	Endiva.....	Endywia.....	Endivien.....	Endivia.....	Endivie
Kale.....	Chou vert.....	Cavolo verde.....	Solanka.....	Blatterkohl.....	Bretton, Berza.....	Groenkaal
Kohlrabi.....	Chou-rave.....	Cavolo rapa.....	Kalarepa.....	Knollkohl.....	Col Rabano.....	Kaalrabi
Leek.....	Poireau.....	Porro.....	Pory.....	Porree.....	Puero.....	Purre
Lettuce.....	Laitue.....	Lattuga.....	Salapa.....	Salad.....	Lechuga.....	Salat
Melon, Musk.....	Melon.....	Popone.....	Melon.....	Melone.....	Melon.....	Melon
Melon, Water.....	Melon d'eau.....	Melone d'aqua.....	Melon, Wodny.....	Wasser-Melone.....	Sandia.....	Vandmelon
Mushroom.....	Champignon.....	Fungo Pratajolo.....	Grzyb.....	Schwamm.....	Seta.....	Champignon
Okra.....	Gombaud.....	Ocra.....	...	Ocher.....	Gombo.....	Hibiskus
Onion.....	Oignon.....	Cipollo.....	Cebula.....	Zwiebel.....	Cebolla.....	Roedloeg
Parsley.....	Persil.....	Prezzemolo.....	Pietruszka.....	Petersilie.....	Perejil.....	Persille
Parsnip.....	Panais.....	Pastinaca.....	Pasternak.....	Pastinake.....	Chirivia.....	Pastinak
Peas.....	Pois.....	Pisello.....	Groch.....	Erbesen.....	Guisante.....	Erter
Pepper.....	Piment.....	Peperone.....	Pieprz.....	Pfeffer.....	Pimiento.....	Spanks Peper
Pumpkin.....	Potiron.....	Zucca.....	Bania.....	Melon-Kurbiss.....	Calabaza Tomanera.....	Graeskar
Radish.....	Radis.....	Ravanello.....	Rzodkiew.....	Radies.....	Rabanito.....	Reddiik-Radis
Salsify.....	Salsihs.....	Sassefrika.....	Jarzy Ostryga.....	Haferwurzel.....	Salsif.....	Havrerd
Spinach.....	Epinard.....	Spinace.....	Szpinak.....	Spinat.....	Espinace.....	Spinat
Squash.....	Courge.....	Zucca.....	Miekurz.....	Kurbiss.....	Calabaza.....	Squash-graeskar
Swiss Chard.....	Poiree.....	Bieta.....	Beisskohl.....	Bleda.....	Blad bede	
Tomato.....	Tomate.....	Pomo d'oro.....	Pomidor.....	Liebesapfel.....	Tomate.....	Tomat
Turnip.....	Navet.....	Navone.....	Rzepa brukiew.....	Weisse Rube.....	Nabo.....	Turnips

SEEDS REQUIRED PER ACRE FOR FIELD CROPS IN SOUTHERN CALIFORNIA

VARIETY	SEED	HOW TO PLANT	AVERAGE APPROX. YIELD
Alfalfa.....	25 lbs. seed.....	Drills or broadcast.....	8 to 10 tons hay, or 600 lbs. seed
Alfilaria.....	10 lbs. seed.....	Drill or broadcast.....	Pasture
Barley.....	60 lbs. seed.....	Drill or broadcast.....	2 to 4 tons hay
Beans, Bush.....	25 to 40 lbs.	Drill in rows 2 ft. apart.....	1500 to 2000 lbs.
" Lima.....	50 to 60 lbs.	Drill in rows 3 ft. apart.....	1500 to 2000 lbs.
" Windsor.....	100 lbs.....	Drill in rows 2 ft. apart.....	Hog pasture and green manuring
Beets, Stock.....	8 lbs.....	Drill in rows ½ ft. apart.....	20 to 25 tons of beets
Burr Clover.....	20 lbs.....	Drill or broadcast.....	Pasture and green manuring
Cane, or Sorghum.....	5 lbs.....	Drill 5, or broadcast 40 lbs.....	20 tons green fodder
Carrots, Stock.....	4 lbs.....	Drill in rows 1½ ft. apart.....	20 to 25 tons of carrots
Corn, Broom.....	5 lbs.....	Drill in rows 3 ft. apart.....	½ ton broom straw
" Ensilage.....	40 lbs.....	Drill 1 ft. apart in rows 3 ft. apart.....	20 to 40 tons silage
" Field.....	10 lbs.....	Hills 2 ft. apart, rows 3 ft. apart.....	2 tons grain
" Kafir.....	5 lbs.....	Drill in rows 3 ft. apart.....	1 ¼ tons
" Milo Maize.....	5 lbs.....	Drill in rows 3 ft. apart.....	1 ½ tons grain
" Pop.....	6 lbs.....	Hills 1 ft. apart, rows 2 ft. apart.....	1 ton
Cotton.....	15 lbs.....	Drill in rows 4 ft. apart.....	1 to 1½ bales and seed
Cow Peas.....	25 lbs.....	Drill in rows 3 ft. apart.....	Pasture and green manuring
Feterita.....	5 lbs.....	Drill in rows 3 ft. apart.....	2 tons grain
Grass, Italian Rye.....	20 lbs.....	Broadcast.....	Hay and pasture (damp land)
" Pasralum.....	20 lbs.....	Broadcast.....	Cut 1½ tons per acre 4 times (dampland)
" Perennial Rye.....	20 lbs.....	Broadcast.....	Hay and pasture
" Rhodes.....	20 lbs.....	Broadcast.....	Cut 2 tons per acre 3 times
" Sudan.....	10 lbs.....	Broadcast.....	Cut 4 tons per acre 3 times

Number of Plants to Acre

Set at Regular Distances Apart

DISTANCE APART	NO. PLANTS
1 ft. by 6 in.	87,120
2 ft. by 6 in.	43,560
2 ft. by 12 in.	26,780
2 ft. by 18 in.	14,520
2½ ft. by 12 in.	17,420
2½ ft. by 18 in.	11,616
2½ ft. by 2 ft.	8,712
3 ft. by 1 ft.	14,520
3 ft. by 1½ ft.	9,924
3 ft. by 2 ft.	7,260
3 ft. by 3 ft.	4,840
4 ft. by 1 ft.	10,890
4 ft. by 2 ft.	5,445
4 ft. by 3 ft.	3,630
4 ft. by 4 ft.	2,722
5 ft. by 1 ft.	8,712
5 ft. by 2 ft.	4,356
5 ft. by 3 ft.	3,904
5 ft. by 4 ft.	2,178
5 ft. by 5 ft.	1,742
6 ft. by 3 ft.	2,420
6 ft. by 4 ft.	1,815
6 ft. by 6 ft.	1,200
7 ft. by 7 ft.	888
8 ft. by 8 ft.	680
9 ft. by 9 ft.	537
10 ft. by 10 ft.	435
11 ft. by 11 ft.	360
12 ft. by 12 ft.	302
14 ft. by 14 ft.	222
15 ft. by 15 ft.	193
16 ft. by 16 ft.	170
17 ft. by 17 ft.	150
18 ft. by 18 ft.	134
19 ft. by 19 ft.	120
20 ft. by 20 ft.	108
25 ft. by 25 ft.	69
30 ft. by 30 ft.	48
33 ft. by 33 ft.	40
40 ft. by 40 ft.	27
50 ft. by 50 ft.	17
60 ft. by 60 ft.	12
66 ft. by 66 ft.	10

Rule.—Multiply the distance in feet between the rows by the distance the plants are apart in the rows, and product will be the number of square feet for each plant or hill; which divided into the number of square feet (43,560), will give the number of plants to the acre.

Average Time Required for Seeds to Sprout

Bean	5-10 days
Beet	7-10 "
Cabbage	5-10 "
Carrot	12-18 "
Cauliflower	5-10 "
Celery	10-20 "
Corn	5-8 "
Cucumber	6-10 "
Lettuce	6-8 days
Onion	7-10 "
Pea	6-10 "
Parsnip	10-20 "
Pepper	9-14 "
Radish	3-6 "
Tomato	6-12 "
Turnip	4-8 "

Plant radishes with slow growing vegetables to mark the rows for cultivation.

The seed catalogue is a valuable compendium of information on how, when and what to plant. It is the result of years of effort on the part of the seedsman. He tells you what varieties do best in this section. The seed catalogue, if taken seriously by the home or farm gardener, will help in raising better crops and in supplying the table with garden produce the year around. Complete cultural directions are found within its covers. It points the way to cheaper food, lower living costs and beckons the man with a piece of tillable ground back to the soil.—Farm & Tractor.

A&M
reliable
SEEDS

Aggeler & Musser Seed Co.'s

Vegetable Seeds are the Standard Seeds of the Southwest

A&M
reliable
SEEDS

The vegetables grown from A. & M. Seeds are the standard vegetables at every market in which they appear. Seed planted out of season or in uncongenial soil means loss to the grower.

ARTICHOKE



Green Globe (Half-Moon Bay Type)

REMARKS: The early artichoke brings a high price; but Southern California climate does not produce them early enough to get this high price, therefore we do not advise planting more than $\frac{1}{4}$ acre for local market.

The best way to get a good artichoke is to secure plants from old stalks of some good strain, as seeds cannot be depended upon to produce any certain variety. One-half dozen is enough for a family garden.

Transplant five feet apart in rows seven feet apart. When the young plants are attacked by aphis spray with "Black Leaf 40." About the time the buds are well advanced under leaves become a harbor for flies and aphis and ants. When this occurs break off all the under leaves, clear the ground of all rubbish and spray with "Black Leaf 40" and use ant poison. See Insecticide page. You will then have a long season of large, clean buds.

(Pkt. 10c) (oz. \$1.20) ($\frac{1}{4}$ lb. \$4.00) (lb. \$12.00) postpaid.

Plants (3 for 60c) (12 for \$2.00) postpaid.

Jerusalem Artichoke



A Windbreak of Jerusalem Artichokes

Let the hog harvest the crop. It is necessary to plant only once. There is always enough left in the ground to reseed.

REMARKS: There is only a limited market for the Jerusalem Artichoke because it is little used for human food, and because of its perishable nature it is advisable that you grow only for your own use.

A border of Artichoke serves as an effective windbreak. It is a most valuable food for hogs. It is said by many hog raisers that a hog fed on artichokes has never been known to have cholera. They grow to perfection here, yielding as much as 500 sacks per acre. They are grown from tubers the same as Irish potatoes. It requires 300 lbs. to plant an acre. Cut the tubers to single eyes. Plant in sandy loam soil during March and April two feet apart, in rows three feet apart. Let them grow until fall and allow the hogs to harvest the crop.

The tubers are excellent for table use boiled as potatoes or parboiled and pickled in vinegar.

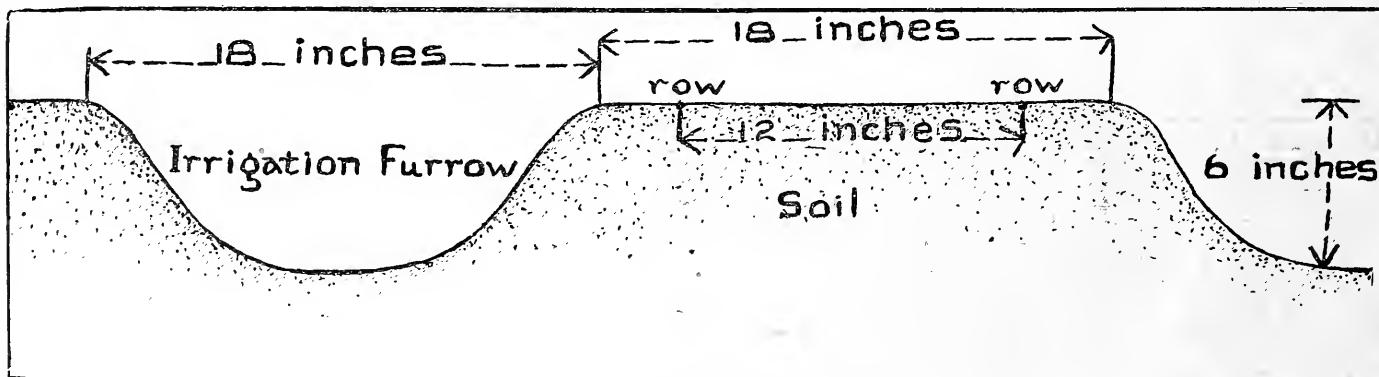
(Per lb. 25c) postpaid. Write for quantity price.

"The seed reached me in perfect condition after a journey half round the world, so it speaks well for your organization. I appreciate your courtesy and promptness."

JAMES JULLIN, The Fort, Lisnarbreeney, Castlereagh, Belfast, Ireland.

"In connection with the high class of the seeds that we purchase from you, we very highly esteem the valuable information you give to growers."

EDWIN S. BROWER, California.



It is through the courtesy of the California Vegetable Union that we present the above illustration which appears in their circular on the culture of Lettuce

How to make Ridges for planting Beets, Chard, Carrots, Kohl Rabi, Lettuce, Onions, Parsley, Parsnips, Radishes, Salsify, Spinach and Turnips. This method is now generally practiced by all market growers who must irrigate. The benefits from planting on ridges are earliness, cleanliness, avoids flooding of vegetables, and insures a more uniform germination.

Better results are attained if the rows run north and south, because the sun lights up both sides, no plant is in perpetual shade.

See Planting Calendar on Inside Back Cover

A & M Asparagus

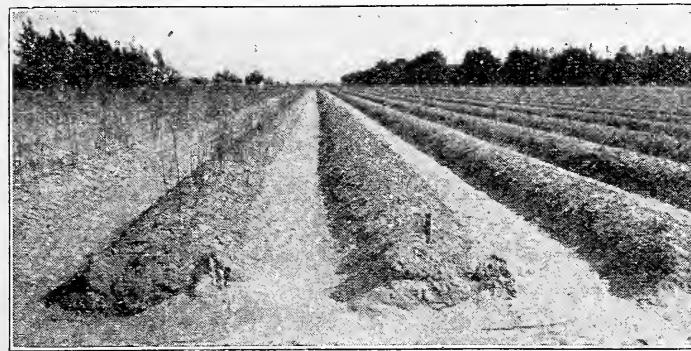
Approximately 500 Carloads of Asparagus, Worth More Than \$500,000 is Shipped Out of California Annually. California Has 17,444 Acres Planted to Asparagus, Five Times as Much as the Next Highest State.

Write U. S. Dept. of Agriculture for Farmers' Bulletin No. 829, "Asparagus."

REMARKS. No vegetable is more healthful or more palatable than the tender asparagus that appears on the table very early in the spring.

Every home garden should have a bed about ten by twenty feet, planting about one hundred roots. This would furnish enough tips from day to day to supply the family table.

Set the rows two feet apart instead of four as for field culture, and one foot apart in the row.



A No. 1 Field of Asparagus, Older Than 25 Years

Culture

Drill the seed thinly in rows fifteen inches apart during March or April. Thin out to two inches apart in order to have strong plants.

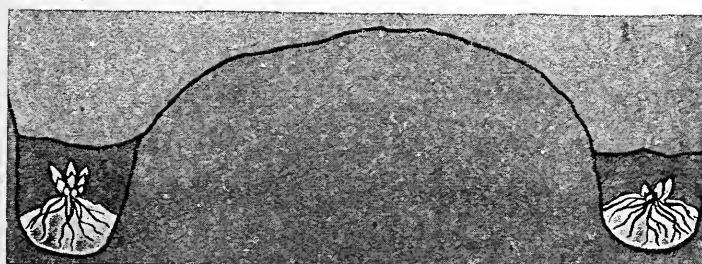
Exercise great care in preparing a field because it will last many years.

Transplant during February setting the roots two feet apart, in furrows six feet apart. Carefully spread out to avoid matting. The furrows should be ten or twelve inches deep and run North and South in order to get the sun on both sides of the rows. Cover the roots about three inches and as the plant grows throw the soil toward the plant. Each year when the berries are red, cut the plants close to the ground and burn, then spray the entire field with Anchor Brand of sulphur, in order to destroy any germs of mildew, red spider or rust that may be there. Keep a mulch over the row with a harrow, but cultivate more deeply between the rows. Use stable manure liberally and hill up a little higher each year. Irrigate freely during the growing period. Three pounds of seed is sufficient to plant an acre.

Growing asparagus offers exceptional opportunity to the ten-acre man who has the right soil near enough to the city to sell at the local market. More than \$1,000 per acre may be realized from March first until June first. It has been reported that as much as \$30,000 has been realized in one season from a ten-acre field.

Use one year old roots; do not cut them back. When planting see that the roots are well spread out so that the soil will touch every part. If this is not done the plant cannot thrive.

Market: A large acreage is grown for canneries, and in sections where it can be produced very early it is grown for Eastern markets. It is also very profitable to grow for local market.



Plant Asparagus Roots one foot apart in trenches six feet apart for field culture; only two feet apart for home garden.

REMARKS: The green growth above the ground is tender and palatable. The white stem below the surface is tough and unpalatable. Why then is the custom to cut so deep? Would it not be better and a fairer practice to allow the stem to grow a little taller in order that the consumer may get more nearly full measure when he buys a pound of asparagus? To do this would cause no loss to the grower.

Science in Agriculture

Owing to the rust that was so prevalent throughout the east, destroying asparagus fields until it was not profitable to grow, the growers association in Massachusetts under the direction of D. W. A. Orton of the Department of Agriculture, set about to produce a strain of Asparagus that would prove immune to rust. After 15 years of selection and cross pollination they succeeded in producing the desired results and have named it the Washington asparagus. An improved strain was called Martha Washington, and the succeeding season brought forth an earlier strain which was named Mary Washington.

The seed we offer is grown from pedigree stock by a professional grower.

Mary Washington This is the latest introduction of the rust resistant varieties and the best with the advantage over all other varieties of being earlier which means so much to the grower. Seed is very scarce. Per (Pkt. 25c) (oz. \$2.50) ($\frac{1}{4}$ lb. \$7.50) (lb. \$20.00) postpaid.

Argenteuil An excellent variety for the canner and early shipper. This variety is now more extensively grown by large planters and shippers because it is more prolific and stands shipping better. Also its purple tinge is attractive, and its excellent flavor puts it on an equal with the Palmetto for table use.

(Pkt. 10c), (oz. 20c), ($\frac{1}{4}$ lb. 50c), (lb. \$1.50 postpaid).

Palmetto A popular variety for the home garden or for shipping. The sprouts are green and of delicious flavor. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 45c) (lb. \$1.25 postpaid). Plants (per doz. 50c) (100, \$3.00) postpaid.

Asparagus Knife

Price 90c; by mail \$1.00.

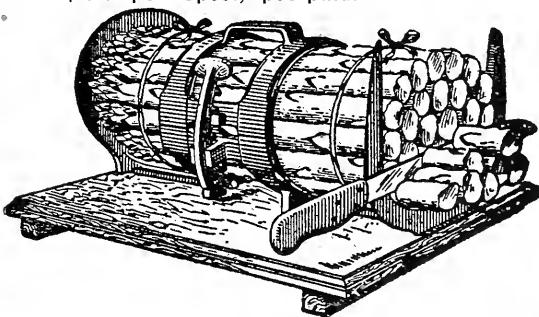
Asparagus Moss

We always have on hand a large supply of moss for asparagus shippers. Price on application.

Tapes

FOR TIEING ASPARAGUS

Spools of 1000 yards, red, white or blue. \$6.75 per Spool, postpaid.

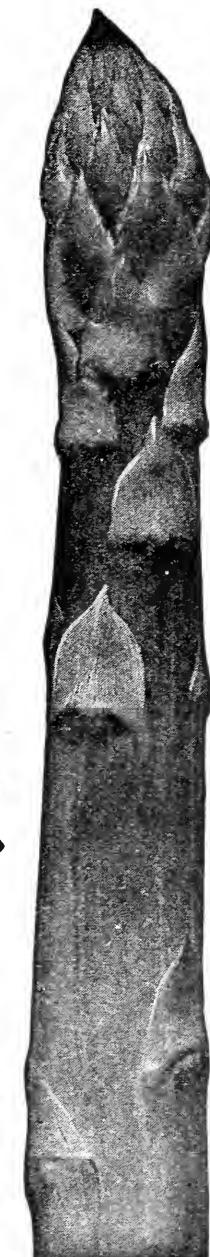


Asparagus Buncher

Asparagus Buncher

We carry the Philadelphia make, which is the popular one with all large shippers. No. 1 size will shape bunches 3-3½ inches in diameter, weighing about one pound. No. 2 will shape bunches 4-5 inches in diameter, weighing about two pounds. Price—(No. 1, \$2.75) (No. 2, \$3.00) f. o. b. here.

Whether your patch is small or large, it will pay you to get an Asparagus Buncher, either one or two pound. All professional shippers put it up that way because it saves the retailer the trouble of weighing and the constant loss of overweight to each pound; besides, this work may be done at home and not at the busy market.



Mary Washington
Asparagus

"I am well pleased with your seeds and information catalog. Thanks to a good reliable seed house to deal with. Yours for success."

MRS. N. A. BAKER, California.

A & M Beans

All 10 lb. Lots of Beans \$3.00 Postpaid. Write for Quantity Price.

Read

All orders for large quantities that would be cheaper to send by express or freight, we deliver to the transportation company at Los Angeles. We do not prepay transportation unless sufficient money has been sent for that purpose.

Market gardeners who are beginners and not familiar with gardening in the Southwest would do well to consult us either in person or by mail before buying, as to variety and time of planting. Special attention should be given to the instructions concerning the time of planting, which is an important factor in Southern California, as each month requires a different variety according to the market for which they are grown.



Ventura Wax

All Beans and Peas are hand-picked. This gives the grower more and better seed per pound. When buying get the best.

The hand picking of seed beans is a task of large proportion and it may surprise you to know that we have employed almost throughout the entire year, six or more persons constantly hand-picking beans and peas. The cost of hand picking is never less than one cent per pound and often as much as two cents, according to the amount of waste that is picked out.

The loss to the planter of seed that is not hand-picked is approximately 10 per cent of the crop.

When purchasing beans ask for hand-picked seed.

Bean Culture for Home Gardens

During the early spring give sandy soil preference, but heavy soil in summer. When the ground is properly moistened and pulverized, plant bush beans one or two seeds every four inches, in rows twenty to twenty-four inches apart. If the soil is heavy, one-half inch is deep enough. Plant deeper in sandy soil. During the cool spring months plant shallow; during the hot summer months plant down to moist earth. Do not plant in soil that is too wet, nor irrigate immediately after planting, else the seed will rot. During the winter months do all irrigating in the morning, because the water from the pipe is warm and will help the growth. When applied in the evening the water chills the plants, cools the soil, retards the growth and causes mildew. During hot summer days irrigate in the late afternoon. Never sprinkle beans.

Mulch the soil as soon as it gets dry after each irrigation. All beans should be sprayed with powdered sulphur of the best grade twice during the season—once before the blossom appears and again just before the green bean is ready to pick. Apply the Anchor brand of sulphur in the morning of a bright sunny day before the wind rises, and before the dew has

dried. It is not necessary to cover the foliage with sulphur thick enough to injure it, but if sulphur is scattered along the row so that the dust will pass lightly over the field, the fumes created by the heat of the sun will prevent mildew.

Sulphur will not cure, but will arrest and prevent mildew.

Market gardeners should read carefully the description of each variety.

Anyone having light, sandy soil that needs enriching, should plant it to beans, inoculating the seed with nitrogen culture.

It is not generally known that—

When your bush varieties of string beans have borne a crop don't pull them up but as soon as you have finished the last picking, cut the bush off about six inches above the ground. A new growth will appear and in a remarkably short time bear another crop of beans. The same is true of Fordhook Limas.

The following list comprises all the varieties best suited to general gardening. We have ceased to catalog others that would only mislead the gardener.

Write for quantity prices on all beans.

FLAT YELLOW POD VARIETIES

Ventura Wonder Wax Nearly all agree that this is a wonder indeed. Long flat pod, very prolific; bears early, and continues nearly all summer; planted in September, if not too cold, bears until January, being rust proof. This bean was introduced by us in 1900, and has been the market gardener's favorite since that time. Plant from February to October. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid. Write for quantity price, as prices fluctuate.

Rust Proof

"In a field of Ventura Wonder, were some Navys mixed here and there. The Navys were destroyed with rust but the Venturas were unaffected."

A & M Golden Wax Long, flat pod, rich golden yellow, stringless. This variety is so superior to other strains of Golden Wax that we have discarded all but this. Plant early in April and until August. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Davis Kidney Wax Good bearer; pods are long, rustless and hardy; very tender when young. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

This is the best Garden Bean for the interior, Imperial Valley, Arizona and New Mexico, because the blossoms will not fall even at a temperature of 110 degrees, when most other varieties fail, the Davis will yield a big crop. It is an excellent dry bean.

FLAT GREEN POD VARIETIES

Canadian Wonder Flat pod of good flavor, not stringless, but otherwise tender. Very hardy. Desired above all others by gardeners growing on the foothills for winter shipping, because of its luxuriant growth and continuous bearing of long, straight pods. Plant in September, October, November, December and January, according to your locality. (Per pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Dwarf Horticultural Desirable for green, shell and dried beans. Stringless and of excellent flavor. It is of Italian origin and is very popular with the Italian population. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Six Weeks A strong, rapid grower, which matures quickly. Flat pod. Only desirable for forcing. Plant in February and March, also early in September and October. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

French Mohawk Long oval pod, very tender and prolific. Matures in six weeks. Desirable for a profitable short crop, as only two months is required from seed time to the end of the crop. Plant every month from March to October. (Per pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

ROUND YELLOW POD VARIETIES

Refugee Wax This is a favorite because of its hardy growth and enormous yield of tender round stringless pods of excellent flavor. Plant from April until September. (Per Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Prolific Black Wax Pod round straight, five to six inches long. Decidedly the most desirable for mid-summer gardening. Plant from April to August. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

ADVICE

Watch for the slightest indication of mildew. When it appears spray with the Anchor Brand of Sulphur. This will not only arrest any further advance of mildew, but it will fertilize the soil and destroy any germs of Fungi that may be there. For application use the Nico duster.

GROWING GREEN OR WAX BEANS FOR THE CANNERY

It is a good side-crop to grow in a young orchard to make quick returns, because your crop is off and the ground available for another crop within ten weeks, besides it enriches the soil. The Refugee 1,000 to 1 is a favorite with canners.

BUSH BEANS—Continued

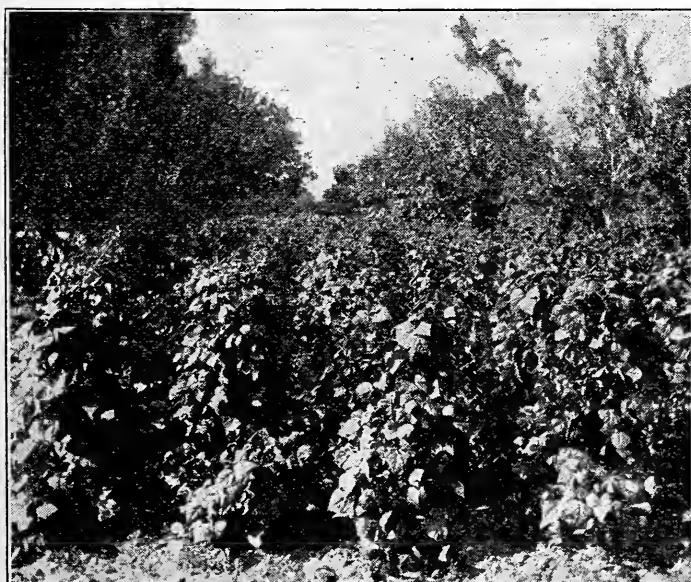
Stringless Greenpod

ROUND GREEN POD VARIETIES

Stringless Green Pod One of the best varieties for the first early spring planting. It is very prolific and tender, a great favorite with market gardeners, for a quick maturing crop. Plant from April 1st until Aug. 1st. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Refugee or 1000 to 1 An all around favorite for the summer months. Round pod, medium size, tender, desirable for table and cannery. It is a favorite with the market gardener because it is a good shipper, a good seller, and very prolific. Plant from April to August....(Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Extra Early Refugee Pods round, light green, extra fine and is very prolific. Mature very early which is a great advantage to one who grows for market. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

POLE BEANS

Only a 4-foot plaster lath. A very economical and satisfactory way to train all pole beans

Celestial or Yard Long

Yard Long Bean

Celestial or Yard Long

A good table bean as well as a curiosity. It is very prolific and a rank grower. Should have ample arbor to climb upon. It should be grown more extensively in the home garden. It is of Chinese origin and one of the best vegetables emanating from that source. It is also absolutely rust-proof. (Pkt. 10c) (1 oz. 20c) (1 lb. \$1.50) postpaid.

The Scarlet Runner An old-time favorite that heretofore has been planted chiefly for ornamental purposes. But few people know that the Scarlet Runner may be planted May 1st and in six weeks attain a height of eight feet, and rapidly cover an arbor with vines twenty feet long.

The Scarlet Runner planted May 1st will bear edible pods from July 1st until late fall. When the vines mildew trim them back to within a foot of the ground. The roots will survive the winter, and by the following May will have the arbor again covered and bear green beans until August, when vines again mildew. Cut back as before and with proper irrigation they will bear another crop in October, and so on, two crops a year indefinitely.

Be sure to build a permanent arbor, and plant some Scarlet Runner during April. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

RECIPE—Pick when pods are quite green, cut lengthwise into slices and cook as string beans. They are very tender, stringless and have a delicious flavor quite distinct from other beans.

Lazy Wife One of the best pole beans for snaps. The large, fleshy pods are five to six inches long and entirely stringless when young, have a rich buttery flavor. When nearly matured they are delicious when shelled and cooked while yet green. The dry beans, too, are unsurpassed by any. The seed is white, nearly round, and somewhat bigger than a pea. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Horticultural Pole Also referred to as Romaine, Cranberry, Italian and Cornfield. Its large succulent tender pods make it a desirable bean for the table. It is one of the most desirable green shelled beans for succotash and excellent as a dry bean. It is also excellent when parboiled and pickled in a mild solution of vinegar and water. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

White Creaseback This variety is especially valuable for its extreme earliness, and its habit of perfecting all its pods at the same time. Vines small but vigorous, and, in good soil, wonderfully productive, bearing pods in clusters from four to twelve. Pods medium length, silvery green, of the best quality as snaps and stand shipping better than most sorts. The seed is small, oval, very white and hard. It is an excellent bean to cook dry or to sell on the open market as the small white bean. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

"Kindly place my new address upon your mail list in order that I may not miss your '24 edition of catalog."

Ten years' use of your seeds speaks well for their productivity and my satisfaction with results obtained."

D. W. HOECKLEY, California.

"Having many years of good luck with Aggeler & Musser seeds, I take great pleasure in asking for one of your 1924 catalogs, as I am about to pick my garden and vegetable seeds."

A. H. McLAUGHLIN, Los Angeles

POLE BEANS—Continued

A Word About Pole Beans Many growers hesitate because of the scarcity of poles. This objection is easily overcome, and the greater profit in growing the pole varieties should be sufficient reason for going to a little extra care.

Kentucky Wonder The Kentucky Wonder was for many years the most popular bean with market gardeners as well as for the home gardeners. Its long round stringless pods are very prolific and tender. Its only drawback was the fact that it is much more susceptible to mildew than other varieties. For April and May planting it cannot be excelled. It has brown seed of little value as dry beans. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

MRS. NEILSON, Burbank.

I purchased of you fifteen cents worth of Kentucky Wonder Beans and planted 4 rows 60 feet long. I gathered 380 pounds of green beans. They were trellised with 4 ft. lath.

White Seeded Kentucky Wonder

This popular Bean was first introduced by us in 1909. Because of its resemblance to the well-known Kentucky Wonder but having white seed, we named it the White Seeded Kentucky Wonder. It proved to be all that we had claimed for it, so that it is now the most popular green Bean on the market. It is preferred by the shippers because of its solid pods, and by the canners for the same reason. The grower prefers it because it is a good seller and a money-maker.

This variety of the many pole beans may truly be termed the All-Round Money-Maker. It is as hardy and rust resistant as the Canadian Wonder. In the South where earliness and lateness mean so much to the market gardener, the White Seeded Kentucky Wonder is far ahead of other varieties. It is enormously prolific of firm pods that withstand shipping to almost any part of the United States. It matures ten days earlier than the Brown Seeded Kentucky Wonder.

This variety is now being offered as a rust-proof pole bean. It is more rust-resistant than other varieties.

The seed is pure white, and on that account is a profitable commercial bean. It is the best bean for the gardener, the shipper and canner. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Kentucky Wonder Wax The Pride of the Garden. Its popularity as a home garden bean soon reached nationwide proportions, and today is offered by nearly every seedsman in the United States. It commences to bear when scarcely higher than the average bush variety, and keeps on producing until killed by a frost. It is a rampant grower, one plant filling a pole with a mass of vines densely loaded with luscious golden beans. They are firm, entirely stringless, and when cooked, deliciously rich and buttery. The seed is brown, closely resembling that of the Kentucky Wonder. Plant from April to August. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Superior Kentucky Wonder

We have been growing this bean on our trial grounds for two years, and are now convinced it is superior to any of the other Kentucky Wonder types offered by us for the home garden.

The large size pods fill perfectly and in the "snap" stage are deep green color, meaty, stringless and of a delicious flavor. Vines continue to bear immense quantities throughout the season if kept picked closely. When allowed to ripen the shell beans of pure white color are most excellent for winter use. It is a pole snap bean that no home garden should be without. It's the one pole bean for any garden, and you will never regret planting it. It will prove a prize winner in any contest. (Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) postpaid.

Italy's Favorite An all around good bean for the family garden. A stringless green pod of excellent flavor; a good green shelled bean, good for succotash, for canning and none better for cooking. It is an all around good commercial bean. (Pkt. 10c) (½ lb. 25c) (lb. 40c) (10 lbs. \$2.75) f. o. b. here.

A LITTLE HINT TO THE NEWCOMER

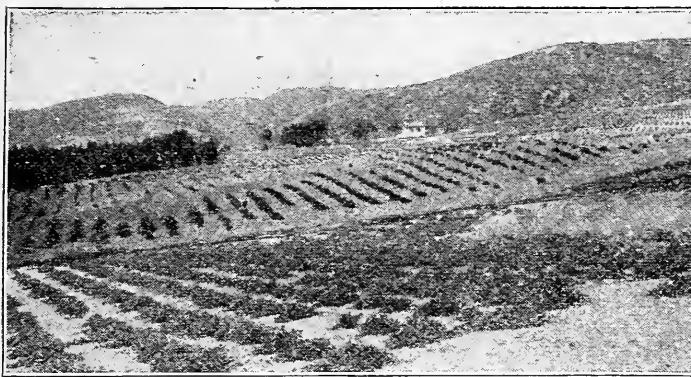
You have purchased your land, but you are all at sea about season. What to plant and when to plant it is a puzzle; just read this catalog, and you will find the answer. But that is not all; you want more advice. Well, just write us, stating the nature of your ranch with regard to the following conditions,—sandy, loam, adobe, swamp, mesa, foothill, irrigation, acreage, and proximity to market. Are you a gardener or rancher? We may advise you to plant beans in the fall during September. When they are marketed plant potatoes or peas (as your conditions may suggest). When this crop is harvested plant corn and melons. Thus you will have three crops within twelve months. Such information is often a surprise to the newcomer, but the great Southwest is full of surprises and great possibilities.

As soon as you have learned the trick, you are one of "us," and your letters home will cause your friends to say: "There is another California prevaricator." You just can't make them believe it until they come.



Superior Kentucky Wonder—Actual Size

Monstrous Lima



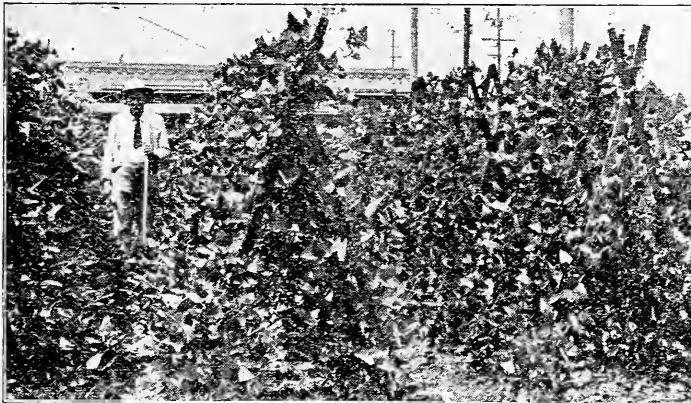
This is not a vineyard but a field of Monstrous Lima Beans

There is nothing more profitable in a city garden than a dozen stalks of this wonderful bean. It is a common occurrence for our city customers to tell us of its great productiveness and excellent flavor.

The grower picked one and one-half barley sacks of green beans from one vine at one picking.

Two crops a year for many years. Originated in Orange County, Cal. Introduced by us in 1907.

In addition to this we have numerous testimonials to the effect that we have not exaggerated when we claim this to be the largest, most prolific, most profitable and best flavored Lima bean now in existence. Like every other vegetable, it must have proper culture. Plant 6 feet by 6 feet, leaving one stalk in each hill. If convenient, plant in a sheltered place about April 1st. You will then be gathering beans during September and possibly until January. After a while new growth will appear, then prune as you would a grape vine, and by May 1st you have a new crop as profitable as peppers or string beans or any other early vegetable. During July the vines will show age and become mildewed; prune as before and in October you will begin gathering your third crop. Continue pruning twice a year; irrigate and fertilize. (Pkt. 15c) ($\frac{1}{2}$ lb. 35c) (lb. 60c prepaid) (10 lbs. \$5.50 prepaid).



A Good Way to Train All Pole Lima Beans

Pole Lima Beans

In California the 1920 Crop of Beans was 180,000 Acres, Valued at \$19,500,000.

Pole Lima Pole varieties of Limas are far more profitable to grow than the bush varieties; what they lack in earliness they make up in continuous bearing. They should be planted from April 1st until September 1st.

King of the Garden Very prolific; large and desirable both for the home garden and for the market gardener. (Per pkt. 10c) ($\frac{1}{2}$ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Early Leviathan We recommend this variety to be planted where it may have a trellis to climb upon. It is the earliest lima for the home garden. It is very productive. The pods grow in clusters. (Pkt. 10c) ($\frac{1}{2}$ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

"We have used this catalog as a garden guide and found it very helpful. It is much more complete than most seed catalogs."

GEORGE KNOX, Oregon.

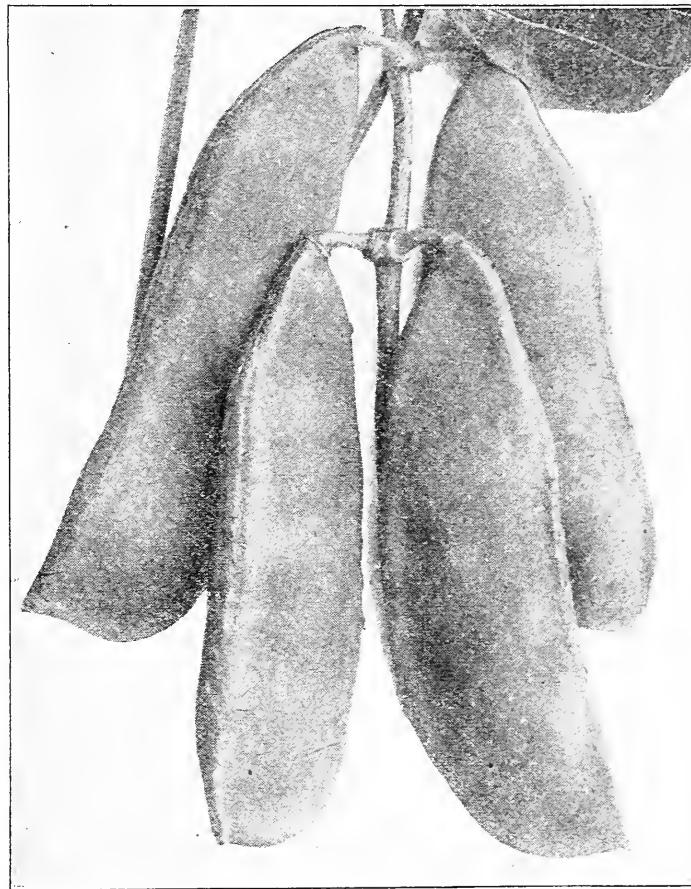
Bush Lima Beans

SPECIAL FOR MARKET GARDENERS

The Bush Lima cannot be recommended too highly. The beans can be grown and gathered much more easily than the pole limas as the vines require no support. They can also be grown closer together. Dwarf limas are fully equal in quality to pole limas and as a rule are earlier maturing.

Limas require a longer season for maturing than other garden beans. Do not plant till the ground is warm and danger of frost is over. If possible select rich, light soil. Plant in rows two to three feet apart, dropping the beans three to four inches apart and covering $1\frac{1}{2}$ to 2 inches deep. Hoe often, but only when the leaves are dry.

Fordhook is the Gardener's Favorite



A & M Fordhook

Fordhook Bush Lima In order to get the best results, plant one foot apart in rows $3\frac{1}{2}$ feet apart. It is an improvement over the well known bush Lima because it is more prolific. It is a strong grower, more resistant to blight, and is more profitable to grow for the market because the pods remain green. This is of great advantage to the peddler, retailer and shipper. It has received universal praise. We recommend it to our customers for both home and market gardens—for the home garden because of its excellent flavor and productiveness; for the market gardener because it is demanded by the shipper and consumer. (Pkt. 10c) ($\frac{1}{2}$ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Improved Bush Lima This bean differs from the old bush variety in being ten days earlier. Will yield one-fourth more tonnage per acre. The pods contain four to five beans that are larger and thicker than the old bush lima. Where the Improved Bush Lima is known the old variety is no longer in demand. (Pkt. 10c) ($\frac{1}{2}$ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Henderson's Bush Also called Baby Lima. Small white Lima Bean, of excellent flavor and enormously prolific. It is grown so extensively here that it ranks commercially with common limas and other commercial varieties. It is used largely for canning. (Pkt. 10c) ($\frac{1}{2}$ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid. Ask for quantity price.

Burpee's Bush Lima This bean has become very popular with the market gardener in all irrigation districts because it is earlier and more easily grown. There are no vines in the way when irrigating and cultivating. It is enormously prolific and keeps bearing a long time. (Pkt. 10c) ($\frac{1}{2}$ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid. Write for quantity price.

Commercial Beans

Bean Culture Write United States Department of Agriculture, Washington, D. C., for Farmer's Bulletin No. 907. It contains some practical illustrations. They will be sent free.



Reading from left to right:—Broad Windsor, Lewis Lima, Red Kidney, Pinto, Pink, Garvanza, Blackeye, Mexican Red, Lady Washington, Navy, Tepary, Lentil.

Be sure to consult us when in the market for these varieties.

If only one pound is desired, send 25c to cover packing and postage. For larger quantities, ask for the prevailing prices.

Ask for price at the time of purchase. Because of the close margin at which this seed is sold, no price can be set in advance of the daily market. We have the best cleaning facilities on the Coast. All our seed is re-cleaned and even hand-picked when machinery fails.

All commercial beans should be planted in large acreage. It is easier at any time to dispose of a carload than less, and more profitable to the out-of-the-way grower who must always pay the freight to some central warehouse. It is advisable for the small rancher when contemplating the planting of beans to agree with his neighbors to jointly plant not less than eighty acres, as it requires 80,000 pounds to make up a carload for Eastern shipment.

It often requires fifty cents per hundred pounds to ship small quantities to a warehouse, whereas a carload would be shipped direct from your nearest siding at no cost to you, thereby saving to you and your neighbors four hundred dollars on each carload.

Lentil A small lens-shaped pea having a flavor peculiar to itself that is liked very much by many people. It is sold at all grocery stores where it commands a fair price. The vine resembles that of the vetch and it should be cultivated in about the same way and in the same season.

Garvanza—(Chick Pea) This is very popular farther south where it grows to perfection and where the demand for it is very great. However it is sold at all grocery stores and deserves to be in more general use. It grows readily here, the bush is quite ornamental and bears abundantly. A row in the home garden could serve as a very useful hedge or border, or a large grower might well plant 100 acres and realize a satisfactory profit.

The Garvanza grows to perfection as far north as Chico. On the grounds of the Durham State Land Settlement there grew last summer a small patch that was very prolific of large peas and vigorous vines.

Pink An old time favorite because it is very prolific, has a good flavor and is one of the best sellers. It is safe to say that no grocery store in the country is without the Pink bean. It is always listed in the market quotations.

Red Kidney Like the Pink and Navy beans it is sold everywhere and commands a higher price because of its better flavor. It is grown largely for canning. It is easy to grow, easy to thresh and does not pop in the field. The long straight pods bear six to eight beans. This bean is also harder than the other varieties, on that account is often planted late for green beans, the pods of which are tender when grown during the winter months.

Mexican Red The Mexicans do know beans, and this is their favorite. When tourists return from Mexico they at once ask our grocers for this Red bean. Americans who have lived in Mexico for a time are not content without this bean. There is a ready market for it at our wholesale grocers, who supply the great southwest territory with groceries. Plant some for your own use.

The Lewis Lima This common lima is grown so largely in California that it easily exceeds in acreage of all the other varieties combined. There are many strains of the common limas, but the Lewis is conceded to be the best. Our seed is all carefully rogued in the field and hand-picked under our supervision at our warehouse. You will find no splits nor rattlers in our seed. It is a short-sighted policy to buy cheap seed from grocers.

Lady Washington and Navy These two varieties go hand in hand. Both are small white beans, but the Navy is slightly smaller and is often distinguished by being called the Small White, while the Lady Washington is called the Large White, yet the largest is a scant half-inch long, while the Navy is scarcely more than one-fourth inch long.

The Navy is more rust resistant.

The Blackeye This bean is always profitable to the grower because it yields 1500 to 2500 pounds per acre without irrigation, and on almost any kind of soil. It is a good cover crop and soil renovator. The beans find ready market at a fair price. Rabbits will not eat the Blackeye.

The Blackeye is in a class by itself, and the price is not governed by the market for other beans. Indeed the price has proven to be the reverse. When commercial beans are low the Blackeye commands a higher price. It is safe to plant Blackeyes because you always get a crop, and you never fail to sell at a fair price.

If your soil needs humus, plant Blackeye.

Soy Beans See cover crops. Aside from the value of the soy bean as a cover crop its economic value for oil and the oil cake for poultry food amounts to millions of dollars. Its culture in the eastern states is enormous. Maybe our ranchers are overlooking a profitable crop.

Our mills are here to crush them and we have the market for the oil and poultry food.

The soy bean is a very easy crop to grow.

Should you be interested, write the Dept. of Agriculture, Washington, D. C., and ask for Bulletin No. 439, subject, "The Soy Bean."

Broad Windsor This variety is often called the tree bean because it differs from all other varieties in the nature of growth. It is not a vine or bush but one up-right stalk bearing pods at the axil of each leaf, continuously maturing from bottom to top throughout its period of growth. It is used largely as a green shelled bean. The best time to plant it is in September, because it thrives best in cool weather. It endures frost. (Pkt. 10c) (lb. 30c) (10 lbs. \$2.50) prepaid.

It is one of the best nitrogen gathering legumes, and on this account every garden should have a plot of these beans.

We are indebted to Mr. John House for the suggestion that when grown in the home garden, the tops should be pinched off. The beans will become more fully developed.

See cover crops. Write University of Calif., Berkeley, for Circular No. 257, subject, "The Small-seeded Horse Bean."

Dear Sirs:

I note in your catalog that you say the Broad Windsor Bean will stand atmosphere of twenty-eight degrees; a statement, far short of their real hardiness. We have just had three weeks of the coldest weather known here since 1913—twenty degrees or worse. The last week, everything was covered with snow. The beans came out unharmed. With me the beans form large bushes, anywhere from three to a dozen or more shoots, sometimes six feet tall and very prolific.

MAN S. DAVIS.

Notice! Bean Growers!

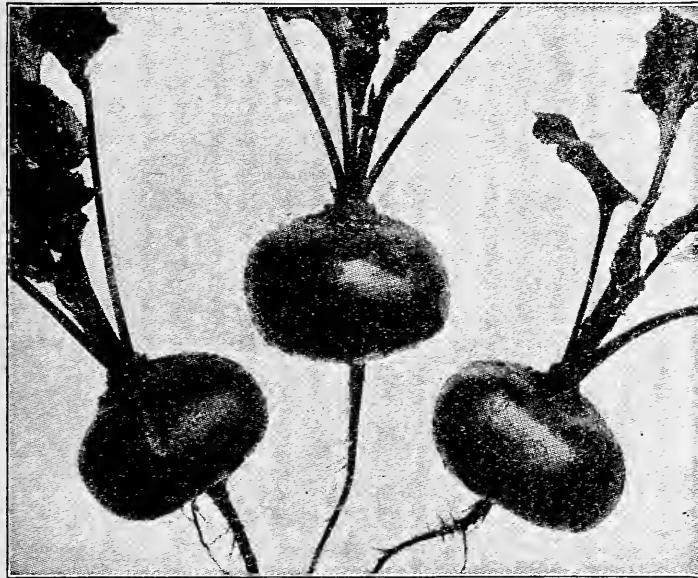
An application of two sacks of Toro Sulphur and 1,000 pounds of lime per acre will greatly reduce your losses from mildew, nematode, and wire worm and will greatly increase your yield. Give it a fair trial.

Aside from growing beans commercially, the grower should consider the benefit derived from growing beans other than a good selling price. Beans fill nicely in crop rotation; whether grown for green beans or dry beans, or only for green manuring, they enrich the soil for a subsequent crop. It is a quick growing crop. For green manuring it may be plowed under within eight weeks; for green beans it is ready in ten weeks; for dry beans the crop may be harvested and marketed within four months. All this means that from April 1st until September 1st it is safe to plant beans, according to the purpose for which you are growing them. For an early crop of green beans, plant Stringless Green Pod; your ground is ready for the next crop within ten weeks. If you would grow commercial beans plant the variety best suited to your soil conditions. If for green manuring the Whip-poor-will seems best where moisture and growing conditions are favorable; the Blackeye where these conditions are unfavorable.

A & M Table Beets

MARKET:—Besides the everyday demand at the local market places, there is the seasonable demand from outside points and for this purpose planting should range from August 1st until January 1st. See the shipper for further information. The canneries too use a large acreage. If you are conveniently located you will be fortunate to secure a contract with one of them.

Culture Beets may be planted all the year round where the temperature does not linger below 30 degrees. Sow the seed one inch deep in well prepared, moist soil in rows eight or ten inches apart, or on ridges same as lettuce. Drill eight pounds of seed per acre. Thin out to one plant every three inches, and transplant the discarded plants in any convenient spot about the garden. The Egyptian is a small, dark red, flat, smooth variety. It is sweetest and best for the table. Irrigate about every two weeks, unless the nature of the soil is such that more frequent irrigation is found to be necessary. Mulch the soil after each irrigation. Beets are ready for use in ten weeks and continue in prime condition for another ten weeks. One ounce of seed for 100 feet of row.



Early Flat Egyptian

Early Flat Egyptian The market gardener's winter favorite on account of its beautiful appearance, earliness, and excellent flavor. (Pkt. 10c) (oz. 20c) (1/4 lb. 45c) (1/2 lb. 65c) (lb. \$1.25) postpaid.

Early Blood Turnip Of large growth. Flesh very tender and retains its blood-red color when cooked. On account of its tall leaves it is a favorite summer time beet with market gardeners. (Pkt. 10c) (oz. 20c) (1/4 lb. 45c) (1/2 lb. 65c) (lb. \$1.25 postpaid.)

Crimson Globe This splendid variety has now been grown quite extensively in many sections of the country and the many good reports received from old customers indicate that it gives most thorough satisfaction. It is of medium size, generally about three inches in diameter, very handsome in shape, with a remarkably smooth surface. It has a very small tap-root. Gardeners prefer it for summer planting because the large foliage protects the beet. (Pkt. 10c) (oz. 20c) (1/4 lb. 45c) (1/2 lb. 65c) (lb. \$1.25) postpaid.

Early Crosby A long time favorite for the family garden. (Pkt. 10c) (oz. 20c) (1/4 lb. 45c) (1/2 lb. 65c) (lb. \$1.25) postpaid.

Detroit Dark Red This is an ideal beet for all purposes. It cannot be excelled for the table; free from all fibre and very sweet. It is the best of all for pickling or canning. Even the tops are good when pickled. (Pkt. 10c) (oz. 20c) (1/4 lb. 45c) (1/2 lb. 65c) (lb. \$1.25 postpaid).

When beet tops are young and tender they may be cooked as spinach and are as good. The stems may be par-boiled and pickled for immediate use.

It is not generally known that—

Beet seed may be planted freely in the row and when six to eight inches high it may be thinned to one plant for every three inches, and the plants pulled cut may be cooked and eaten as spinach.

Swiss Chard may be thinned and eaten in the same way, but the Chard should be thinned to one plant to ten inches. As it grows large the leaves may be broken off at the base of the stem, the foliage cooked as spinach and the stems as asparagus. Both are very palatable.

A & M Stock Beets

Since the coming of the silo, the planting of beets for stock has fallen down until now only a very small acreage is planted. The silo provides the succulent food necessary to feed with dry forage. The growing of corn for the silo is much more economical, but to the breeder of hogs, small stock and poultry, we recommend the planting of beets. The Stock Beet is one of the finest fat and milk-producing crops we have today, and when fed in conjunction with grain they are worth nearly as much, pound for pound, as the grain itself.

If larger quantities are desired, do not fail to write for special prices, as all field seeds are subject to market fluctuations.

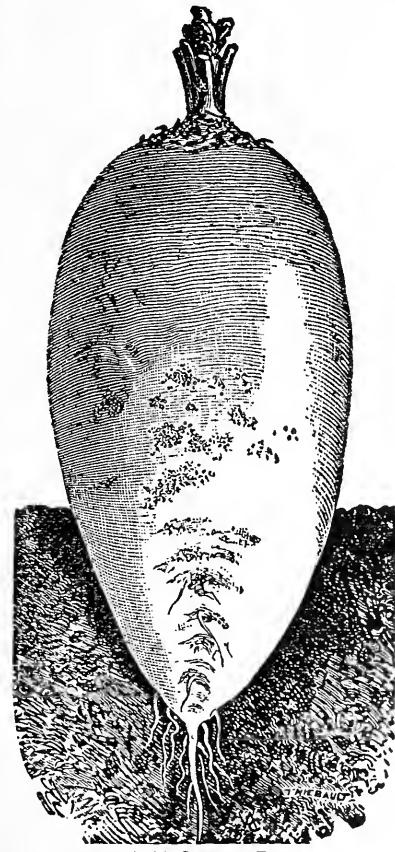
Culture—May be sown all the year round in drills sixteen inches apart. Thin out to stand six inches apart in rows. Keep well cultivated; 8 pounds of mangel, or 10 pounds of sugar beet seed will plant an acre and yield 20 tons or more of beets.



Long Red

Long Red Mangel

The largest Stock Beet. Yields 40 to 50 tons to the acre. Will grow in land containing more alkali than any other beet. All stock except horses eat it readily. (Pkt. 10c) (lb. 60c) (10 lbs. \$6.00) postpaid.



Half Sugar Rose

Golden Tankard Mangel Contains more sugar and less water than any other Mangel. Rich in milk-producing qualities, hence a favorite with dairymen. Horses will eat it (Pkt. 10c) (lb. 60c) (10 lbs. \$6.00) postpaid.

Klein Wanzleben (Sugar Beet). This variety is without question the best in cultivation. Not the largest in size, but the richest in saccharine. It will fatten hogs as quickly as grain. (Pkt. 10c) (lb. 60c) (10 lbs. \$6.00) postpaid.

Sludstrup

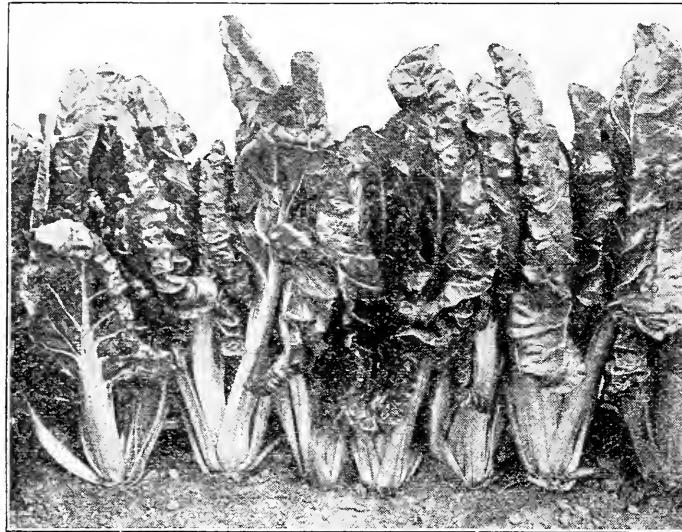
This variety is more extensively grown in Holland by dairymen than any other. Its uniform growth of large, well-shaped beets rich in saccharine. Its record for producing rich milk and sweet butter, has made it the popular beet of that country. We are always on the lookout for something better to offer our trade. We are sure you will add dollars to your dairy by planting the Sludstrup. (Pkt. 10c) (lb. 60c) (10 lbs. \$6.00) postpaid.

The Nematode thrives in beet fields, causing much loss to the grower. Toro Sulphur and lime promises relief. Try it.

A & M SWISS CHARD

Culture—Same as for beets; transplant 8 inches apart in rows 18 inches apart.

Grown for its leaves only; one of the best early greens. Cook the leaves as you do spinach and the stems in cream as asparagus. Leaves grow to enormous size, 20 inches to 2 feet in length. The plant is almost perpetual if kept trimmed, but it is better to have a new crop every year. The tender leaves make it a desirable plant for poultry greens; much more desirable than alfalfa, because it can be grown with less care and in any convenient place about the premises. Try it for your hens.

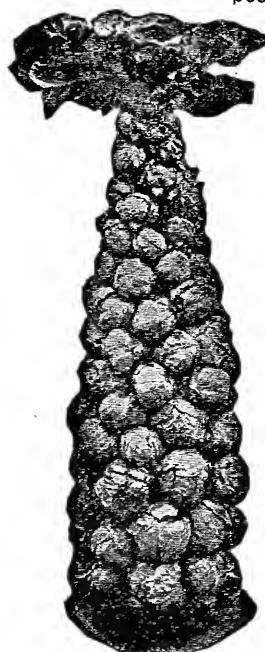


White Swiss Chard

Lucullus (Pkt. 10c) (oz. 20c) (1/4 lb. 65c) (lb. \$2.00 postpaid).
White Swiss (Pkt. 10c) (oz. 20c) (1/4 lb. 65c) (lb. \$2.00 postpaid).

BRUSSELS SPROUTS

Market:—The demand for Brussels



Culture—Same as Cabbage.

Sprouts is probably in excess of the supply, but the cost of production is so high that it must be classed as a luxury. We recommend it highly for the home garden.

One oz. of seed will produce about 5,000 plants.

For Aphis Spray with "Black Leaf 40."

This excellent vegetable, considered the most delicious of all the cabbage family, is finding increased demand in the public markets, and should be grown more largely. It is a long season grower and ranks as to time with our late varieties of cauliflower. Therefore, seed should be planted for succession from July 1st until Nov. 1st.

The increasing demand has spurred us on to look for something better than has hitherto been offered on this market. We have succeeded in securing a medium dwarf variety that bears larger heads, and every joint a head. (Pkt. 10c) (oz. 40c) (1/4 lb. \$1.35) (lb. \$4.00 postpaid).

RECIPE—Boil the same as cabbage, when done drain off the water, butter and season to suit.

Brussels Sprouts

BROCCOLI

A Hardy Strain of Cauliflower

The acreage planted to Broccoli is being enlarged each year; growers find that it endures lower temperatures and more adverse conditions than Cauliflower. It is slow to mature, therefore the seed should be planted during July for an April harvest.

The fact that many growers are securing a satisfactory profit should encourage the planting of large acreage.

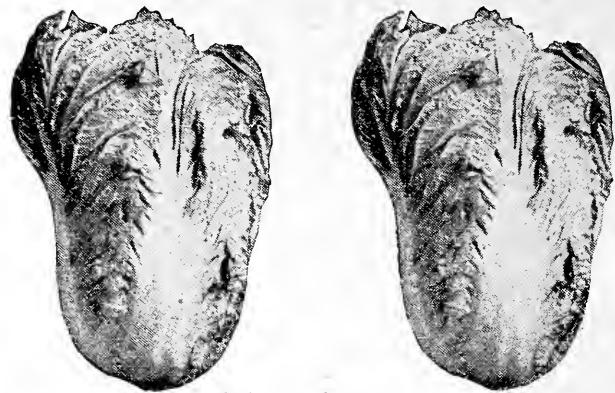
St. Valentine Culture same as for Cauliflower. Broccoli matures 4 to 6 weeks later than Cauliflower which it so much resembles that it is difficult to distinguish the difference. However the foliage is a darker green, and spreads more than does that of the pearl cauliflower.

The St. Valentine variety is grown quite extensively in certain sections of Oregon and in recent years has proven profitable to grow in southern California where there is an increased acreage each year. (Pkt. 15c) (oz. (\$2.00) (1/4 lb. \$6.00) (lb. \$20.00) postpaid.

Purple Cane (Pkt. 10c) (oz. 90c) (1/4 lb. \$3.00) (lb. \$9.00) postpaid.

Snowy White (Pkt. 10c) (oz. 90c) (1/4 lb. \$3.00) (lb. \$9.00) postpaid.

A & M CHINESE CABBAGE



Chinese Cabbage

Culture—Grow it as you do lettuce; transplant 10 inches apart in rows 12 inches apart. Plant from Sept. 1 until Feb. 1.

Boiled with beef or pork it is excellent, having a much more pleasing flavor than cabbage. The inner leaves make better cold slaw. (Pkt. 10c) (oz. 50c) (1/4 lb. \$1.65) (1/2 lb. \$2.50) (lb. \$5.00 postpaid).

Our seed is imported from China. It is the genuine article as pictured here and cannot be compared with the Pe-Tsai seed grown in Europe.

"Tried out some of your seed last spring first time we ever had any luck with Chinese Cabbage seed."

SCHMIDT & WALTHER, Jefferson City, Mo.

Agriculture is a Business

The successful grower of the "Great Southwest" is an expert in his line. He has all the United States for a market during the winter months, and all the arid Southwest in the summer time. He must consider well his soil, be an expert in the selection and use of fertilizers, in the selection of his seed suited to his soil, to his climate, to the time of planting and the market for which he intends to grow. He must know to perfection when to irrigate, to cultivate, and when not to do so. He must study insecticides, know what, when and how to apply them. He must not only keep posted as to market conditions and prices, but must figure ahead on these conditions.

When giving consideration to approximate yields and values, take into account the cost of labor, irrigation, time to fertilize, and expense of marketing. All these figure in determining the net profit. Then consider too the adaptability of each crop to your soil and the purpose for which the crop is intended. All must be considered when deciding the advisability of planting field crops.

When in doubt buy Aggeler & Musser's seeds, and always consult AGGELER & MUSSER SEED CO. on all the above subjects. And keep this catalog.

Notice in this picture the method of planting two rows on a ridge. It is now generally practiced by the large gardeners, and should be applied in the home garden. The drainage this method affords produces cleaner, better and earlier vegetables.

When planting on ridges the rows should extend north and south in order that the sun may shine on both sides of the rows and evenly on both rows. If the rows extend east and west the rows on the north side of the ridges are shaded by the south rows; therefore they will be of slower growth and inferior.



The proper way to grow vegetables where irrigation is necessary

The following is a list of vegetables that should be planted the way we have illustrated in the picture:

Beets	Carrot	Lettuce	Parsley	Radish	Spinach
Chard	Kohlrabi	Onion	Parsnip	Salisfy	Turnip

A & M Cabbage

Cabbage may be grown all the year in Southern California and throughout the Southwest.

It should be borne in mind that the big planting of cabbage is intended to meet the Eastern demand in midwinter and early spring, and that our time of planting is out of the natural season, and therefore often subjected to unseasonable weather, which causes it to be stunted and often shoot to seed. The wonder is that any of it matures.

Improper culture, too, will stunt the normal growth of cabbage and cause the heads to prematurely go to seed.

Cabbage requires heavy soil but good drainage and frequent but shallow cultivation.

Culture—The secret of growing hardy plants is to thoroughly prepare the soil in the plant bed. Plow the soil to a depth of eight or ten inches, pulverize well. Sow in drills not too freely, about one-half inch deep, press the soil firmly over the seed; this is important. In about six weeks transplant in rows three feet apart, one foot in the row for Winnigstadt, eighteen inches for large-heading varieties. Keep the crop well watered and cultivated for when the growth is checked the seed head matures and bursts forth as soon as moisture is again applied. This accounts for much cabbage going to seed. Early varieties mature about three and one-

half months after transplanting, late varieties in about five months. Should there be a cold spell when the thermometer lingers below 25 degrees, just at the time the cabbage begins to head, you may expect twenty-five per cent of your crop to shoot to seed.

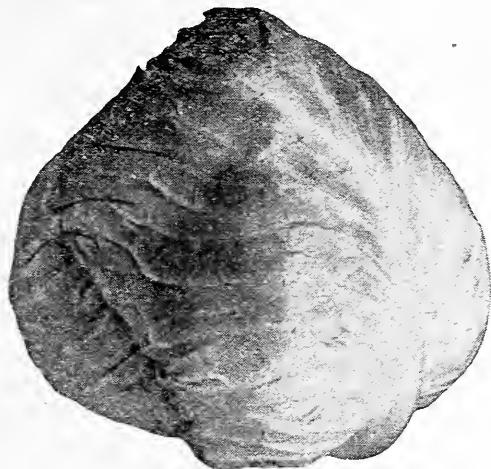
One large and constant grower says: "November transplanting escapes the hard winter season that causes so much loss by shooting to flower."

For Cabbgae Worms—We do not hesitate to recommend Paris Green to be used up to two weeks before marketing the cabbage because the spray only reaches the outer leaves that are not eaten, and because within two weeks the elements neutralize the poison. Also when only one tablespoonful of Paris Green is mixed with four gallons of water and kept well agitated there could not possibly be poison enough on a head of cabbage to even make any one sick. Add 1 cupful of flour paste to make it adhere.

For Aphis—Apply Nico Dust.

Marketing—The every day demand at the local market should be met with the most palatable varieties like the A & M Early Drumhead, Copenhagen Market and Glory of Enkhuizen.

A & M Scott's Cross



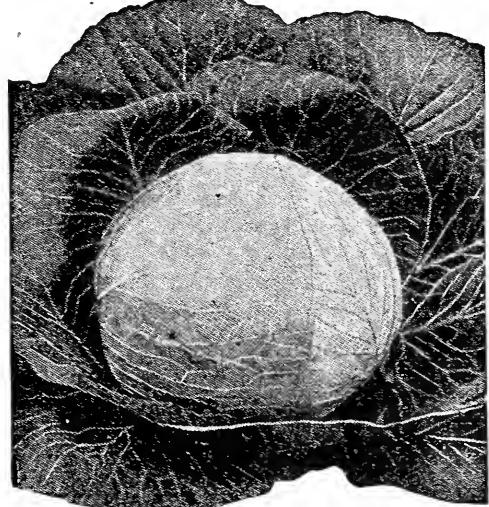
Scott's Cross

The introduction of this cabbage into the Southwest means millions of dollars to the growers. An ordinary average yield of Winnigstadt per acre is eight to ten tons. Scott's Cross will average twelve to fourteen tons of a better grade. This means about fifty dollars per acre more at no greater expense. Scott's Cross is one of the best to grow for shipping. It is a cross between the Winnigstadt and the Flat Dutch. It promises to outrank the Winnigstadt, but up to the present time there has been some variation as to its type and uneven maturing, but it is such an excellent cabbage because of its hardiness that we have contracted with our seed grower to make a perfect type by selection. This has now been accomplished. We wish all cabbage growers to give it a trial this spring, that you may not hesitate to plant it next fall. (Pkt. 10c) (oz. 50c) (1/4 lb. \$1.65) (lb. \$5.00) postpaid.

Early Jersey Wakefield Very early, maturing in 90 days. Small head inclined to point like the Winnigstadt. Recommended for home garden where earliness is desired. (Pkt. 10c) (oz. 35c) (1/4 lb. \$1.20) (lb. \$3.50 postpaid).

Copenhagen Market

At our trial grounds, the Copenhagen Market showed a remarkable uniformity of type. Heads slightly larger than the Cannon Ball, maturing about two weeks later, we recommend it to all growers and shippers as being superior to the Cannon Ball, it will yield more tonnage per acre.



Copenhagen Market

(Pkt. 10c) (oz. 40c) (1/4 lb. \$1.35) (lb. \$4.00) One grower reports having purchased from us 1/4 lb. of Copenhagen Market seed with which he planted 1 1/8 acres from which he marketed \$524.00 worth, having sold his cabbage at \$40.00 per ton.

Glory of Enkhuizen The grower when introducing this variety pronounced it the ideal for the home garden. It is similar in shape and habit to the Danish Ballhead, just ideal for the local market. (Pkt. 10c) (oz. 40c) (1/4 lb. \$1.35) (lb. \$4.00) postpaid.

Cannon Ball (Short stem Danish Ballhead) This has become one of the standard varieties for shipping. It is now grown as extensively as the Winnigstadt but it is planted mostly during August and September for early shipping while Winnigstadt is preferred for mid-winter crop. (Pkt. 10c) (oz. 40c) (1/4 lb. \$1.35) (lb. \$4.00) postpaid.

Late Drumhead A large variety used extensively for making Liberty Cabbage. (Pkt. 10c) (oz. 35c) (1/4 lb. \$1.20) (lb. \$3.50 postpaid).

Drumhead Savoy The best of all Savoys. Short stump, large size, solid head. (Pkt. 10c) (oz. 40c) (1/4 lb. \$1.35) (lb. \$4.00) postpaid.

Red Dutch Excellent for slaw. (Pkt. 10c) (oz. 40c) (1/4 lb. \$1.35) (lb. \$4.00) postpaid.

Autumn King It is tender and of excellent mild flavor, ideal for Liberty Cabbage, and it will yield more tons of good cabbage per acre than any other variety. (Pkt. 10c) (oz. 35c) (1/4 lb. \$1.20) (lb. \$3.50) postpaid.

A & M Early Drumhead Year by year this variety becomes more and more popular. It is very early, tender, crisp, and just the right size for the dealer. Truckers like it because every stalk produces a head. (Pkt. 10c) (oz. 35c) (1/4 lb. \$1.20) (lb. \$3.50) postpaid.



Winnigstadt

No other vegetable listed in our catalog has retained its popularity so continuously and for such a long time as our strain of Winnigstadt Cabbage, introduced by us in 1896. It is now, and has been ever since that date, the most popular cabbage grown in Southern California. It is popular because it is early, solid, good flavor, sure header, and good shipper. (Pkt. 10c) (oz. 35c) (1/4 lb. \$1.20) (lb. \$3.50 postpaid).

Winnigstadt Cabbage is worth \$1,000,000 annually.

Early Flat Dutch This is a favorite for the home garden because of its earliness and its excellence for the table. It is a sure header. (Pkt. 10c) (oz. 35c) (1/4 lb. \$1.20) (lb. \$3.50) postpaid.

A & M Cauliflower

2,076 Carloads of Cauliflower Were Shipped out of Southern California in 1920; All of it Was the California Pearl Variety.
If you are growing Cauliflower for the shipper, ask for circular of cultural instructions

A & M Pearl Cauliflower

This wonderful Cauliflower is a great favorite from California to New York, because of its excellent shipping qualities. It originated here and has made Southern California famous for her excellent cauliflower. The California Pearl is thoroughly adapted to our mild winter climate and is particularly suited for shipping because of the flower being completely enveloped within spiral curled leaves, which protect the flower from injurious exposure to rain, sunshine or frost, but particularly from injury in packing and in transit. It retains its fresh appearance longer than any other variety. It is decidedly the shipper's favorite. It is the gardener's, the dealer's and the consumer's favorite. To be packed for shipping it is only necessary to cut the stem at the base of the head, and the leaves about two inches above the head. This leaves foliage enough to cover the crown without wrapping in paper. These heads are packed two layers in a crate (16 inches deep), with the base at the top and bottom, the crowns facing the center, usually 24 heads per crate.

The small grower may plant at any time from May until February, but for profit the large grower should carefully pursue instructions given with each variety.

When you consider that the amount of cauliflower shipped from California each year runs into thousands of carloads, valued at \$1,000,000, and practically all of it is the California Pearl, the value of this type is of so great importance that we are proud to have been the introducers of it.

Culture—(For Shippers)—Choose soil from a rich loam to a heavy adobe. The field should be level to afford a uniform moisture. Avoid planting Cauliflower or Cabbage on a hillside.

Early varieties should be planted in the seed bed from May 1st to July 1st. Late varieties from June 1st to August 1st. Early planting of seed is advised in order that the plant may have fully developed before the proper season for maturing. Growers are constantly endeavoring to mature a normal crop out of season. Proper culture will accomplish much toward producing a good crop but too much is expected out of the normal season.

Plants should be ready to transplant from six to eight weeks. Early varieties should be ready for market in November; late varieties in December and January, and later according to the time of planting the seed.

Do not attempt to grow Cauliflower or Cabbage unless you have water in abundance.



A & M Early Pearl

Trimmed to Ship

Worth \$1,000,000 annually

A & M Late Pearl Late Pearl Cauliflower attains a height of three to four feet. Plant seed during July to harvest during January and February. This is the variety that has made California Cauliflower famous throughout the United States and is bringing annually more than \$1,000,000 to growers. (Pkt. 10c) (1/4 oz. 65c) (oz. \$2.00) (1/4 lb. \$6.65) (lb. \$20.00) postpaid.

Extra Early Pearl Like the other strains of Pearl Cauliflower it may be depended upon to head up properly. The seed should be planted in May in order to market the crop in November. This is as early as the Snowball variety and when first offered three years ago created some excitement among Cauliflower growers because of its earliness and reliability.

Seed was scarce, we had none last season. We now have ample supply and offer it at half the price growers paid for it two years ago. (Pkt. 10c) (1/4 oz. 65c) (oz. \$2.00) (1/4 lb. \$6.50) (lb. \$20.00) postpaid.



A & M Snowball

Snowball This variety is in a class by itself for earliness. The demand for seed begins in April for May planting, which is ready for the local market beginning October 1st.

There is good profit in the early variety, but care should be exercised to avoid blighting by excessively hot weather. At such times apply water abundantly, but cultivate judiciously to prevent any baking of the soil. (Pkt. 25c) (1/4 oz. \$1.00) (oz. \$3.50) (1/4 lb. \$10.00) (lb. \$35.00) postpaid.

"Last summer I purchased from you one ounce of medium Pearl Cauliflower seed. I planted it July 9th and transplanted October 4th. We cut the first heads March 7th. It is the finest Cauliflower I ever saw. The heads averaged about seven pounds, many more much heavier."

This Cauliflower was raised on the hills seven miles north of Woodlake without irrigation. My soil is very damp."
W. W. THOM, California.

We have repeatedly advertised in our catalog that we would not be responsible for any crop failures in cauliflower, because of the variable effects of weather conditions.

We had a very decided experience last season of these conditions. The growers in the Lomita district planted seed of the snowball variety May 15th, and again during early June. During August the crop did not look right so that some growers plowed it under, and others were too busy to do so. That which was not destroyed, later matured an exceptionally fine crop. You never can tell whether Cauliflower will succeed or fail. Do not blame the seed.



How Cauliflower is Planted

The furrow is irrigated several days before and immediately after planting. Note the size of the plants, also see the water coming in the furrow

A & M Table Carrots

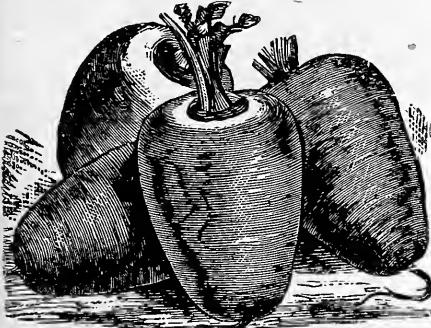
Culture—Sow one ounce of seed to 100 feet of row, four pounds per acre.

Carrots are very profitable because of the large quantity that a small patch can produce, and there is no waste, as any surplus may be fed to rabbits or other animals.

Carrots may be planted all the year round. Sow the seed from one-half to one inch deep in rich, moist, loamy soil, well prepared. Sow in rows eight inches apart, and as thin as the drill can be set to sow, or, if sown by hand, aim to have two seeds to the inch, or sow in ridges same as lettuce. Plant the Oxheart variety. It is the best for the table, and the most attractive for the market. The carrot has few insect enemies. Nematode is the worst. Irrigate same as for beets. Carrots are ready for use in eight weeks and remain palatable for six months or longer.

Market—The local demand for Carrots is all the year round, but the chief demand is from the shipper, who wants them from December 1st until May. For this trade the seed should be planted in August and September. The shipper wants the Chantenay, Oxheart and Danver Half Long.

There are many rabbit hutches within the city where carrots are used throughout the year. If you live a convenient distance from one of these places you may be able to secure a contract from the owner to furnish carrots. Chantenay and Danver's half long are now the favorites with large growers.



Improved Long Orange A deep orange colored variety adapted for farm or garden culture. (Pkt. 10c) (oz. 20c) (1/4 lb. 45c) (lb. \$1.25) postpaid.

Chantenay Flesh is a deep golden orange color, always smooth and fine in texture, very tender. (Pkt. 10c) (oz. 20c) (1/4 lb. 45c) (lb. \$1.25) postpaid.

Danver's Half Long The roots are smooth and of a rich, dark orange color. One of the best sorts for a main crop because it remains edible in the fields longer than other varieties. (Pkt. 10c) (oz. 20c) (1/4 lb. 45c) (lb. \$1.25) postpaid.

Early French Forcing A small sort but desirable on account of its extra early habit. (Pkt. 10c) (oz. 20c) (1/4 lb. 50c) (lb. \$1.50) postpaid.

A & M Early Gem Somewhat resembles the Guernarde or Oxheart, but is more uniform in shape, of finer texture and almost entirely free from the core usually found in other varieties. Flesh deep yellow, very tender and delicious in flavor. The roots generally attain from four to five inches in length and about three inches in diameter, although they have been grown to nearly double these dimensions. For bunching, the handsome appearance is a marked advantage over all other varieties. It is a favorite with many market gardeners. (Pkt. 10c) (oz. 20c) (1/4 lb. 50c) (lb. \$1.50) postpaid.

A & M STOCK CARROTS

Carrots are healthy food for stock of all kinds and should be more generally grown.

Culture—Drill in rows 12 inches apart, and thin to three inches apart in the row. It requires five pounds of seed to plant an acre.

Half Long White Belgian Is raised exclusively for stock. Grows to a very large size; is easily gathered. Makes splendid food for cattle, horses and hogs; known to yield forty tons per acre. Will keep four or five months after pulling. (Pkt. 10c) (oz. 20c) (1/4 lb. 40c) (lb. \$1.10) postpaid.

Large Yellow Belgian Is similar to the above, but with a light orange color; said to be richer, but does not keep so well. (Pkt. 10c) (oz. 20c) (1/4 lb. 40c) (lb. \$1.10) postpaid.

A Word About Celery Plants

Large growers cut the plants back several times during the growing period. This makes stocky roots. When ready to transplant, each plant is individually prepared by cutting the top back to two inches and all fibrous roots rubbed off and the top root cut to four inches. This makes better planting and the clean root soon sends out a new lot of feeders.

"The Celery seed came up beautifully, they must have been new seed."

W. G. TILGHAM, Florida.

A & M Celery

If you are growing celery for the shipper, ask for circular of cultural instructions.

Culture—Sow one-half ounce of seed to 100 feet of drill; 1/4 lb. per acre. Sow the seed from Jan. 1st to May 1st, in drills six inches apart, not too thick in the row to secure stalky plants. In June when the plants are strong, transplant to furrows three feet apart and six inches deep. Set the plants six inches apart in the furrows; as the plant grows fill the earth toward the plant to secure proper bleaching. Never allow dirt to rest on the heart of the plant. Never work in celery when it is wet with rain or dew. Spray frequently with Bordeaux.

Celery Rot—Do not allow water to stand during the heat of the day after irrigating. It will cause Celery Rot in the early crop.

Hollow Stem—When the growth is rank and the stalks so close that free ventilation of air is retarded during the hot weather, the stems become soft and hollow; therefore, we recommend the single-row planting.

Market—The local consumption and outlying distribution disposes of a very large acreage, but owing to its erratic nature it requires a peculiar soil and professional culture. Therefore, there are few localities where it can be forced to earliness. May, June and July celery brings a high price to the grower. Then there comes an oversupply until the shipper disposes of it. When a surplus exists cold storage is resorted to, with doubtful profit, on account of the perishable nature, the shrinkage and the expense.

Improved Golden Self Blanching (French grown seed.)

This is not the dwarf type that was sold heretofore. The French growers have discarded the former dwarf for a taller type.

This new celery grows very rapidly. The outer leaves grow quite tall so that the grower is inclined to market it before the heart is mature enough, thus disappointing the merchant and causing real monetary loss.

This error may be avoided by allowing time enough for the heart to fill in. Do not harvest too soon.

By following these directions you will have the latest improved type of celery quite distinct from the California type.

(Pkt. 10c) (oz. \$1.50) (1/4 lb. \$5.00) (lb. \$15.00) postpaid.



GOLDEN SELF-BLANCHING

\$300,000.00 Crop

Golden Self Blanching (California grown seed.) Another year has demonstrated that our strain of California grown seed is equal to the imported in producing good celery. Every grower in Florida who tried our California grown seed has ordered ever since in larger quantities. Our seed is now accepted by all who have used it as fully up to the imported. We offer it to you with our full recommendation. (Pkt. 10c) (oz. 80c) (1/4 lb. \$2.65) (lb. \$8.00) postpaid.

California Grown Golden Self-Blanching Celery Seed is now the accepted standard throughout the United States, and is giving such complete satisfaction that American growers are accepting it with absolute confidence, asking only to know the reliability of the seed. That ours is reliable is proven by hundreds of satisfied growers.

White Plume California grown. Its stock, inner leaves and heart are naturally white, so that simply drawing the soil up against the plant and pressing it in is all the work required for blanching. (Pkt. 10c) (oz. 40c) (1/4 lb. \$1.35) (lb. \$4.00) postpaid.

Celery Seed for Flavoring Per lb. 50c postpaid.

CELERIAC

Smooth Prague A large celery flavored root used extensively for flavoring soups, pickles, etc.; also relished as a salad. (Pkt. 10c) (oz. 35c) (1/4 lb. \$1.20) (lb. \$3.50) postpaid.

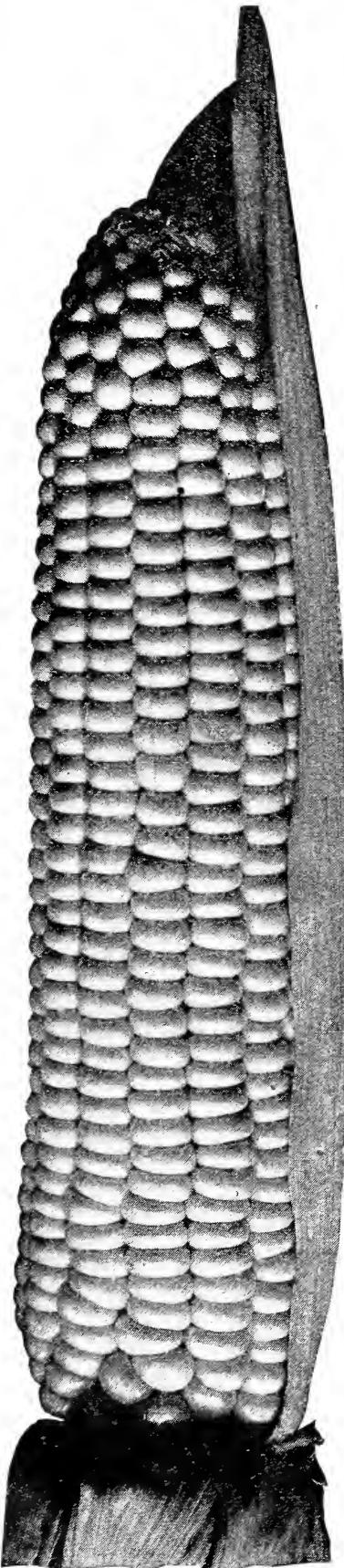
TAPE FOR TYING CELERY

Spoons containing 1,000 yards in Red, White or Blue, \$6.75 per spoon.

For hilling celery there is no better nor more convenient tool to do good work than the Planet Jr. Celery Hiller. See Planet Jr. Implements.

A & M Sweet Corn

NOTE: Prices Given Include Postage



Oregon Evergreen.

The husk is very thick and folds so tightly over the grains that the worm does very little damage, compared with other varieties. It is desired by the peddler and groceryman because of its thick husk, and it can be held over two days before it appears old or wilted. It is very productive, often bearing five marketable ears. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Market.—There is a uniform local demand for sweet corn throughout the season, from the earliest day it is offered until the last field is harvested. Therefore prepare to have some coming all through the season. Oregon Evergreen has not been surpassed since we introduced it. It is yet the best for the market gardener and the most productive.

Culture — Plant from February 15th to September 1st in hills 18 inches apart, in rows three feet apart. Allow two stalks to the hill, break off all side shoots; cultivate after each irrigation until the corn shades the ground; irrigate every two weeks until in the milk, then once or twice a week, and this will produce a solid tight husk, which will prevent the worms from doing much damage.

We are ever on the lookout for something better than that which we have. We are constantly trying out new varieties that show merit, but we studiously refrain from offering to our customers anything new unless it is better than that which we have. It is this policy that has kept the Oregon Evergreen so prominently before you for many years as the money-maker for the market gardener, it has not been excelled.

A & M Oregon Evergreen

Oregon Evergreen corn now has the endorsement of every gardener that grows for the Los Angeles market. We are safe to say that any gardener growing this will show to his customers its superiority over all other sweet corn. It is many years since we first offered this new and distinct variety. The demand has grown each year until it is now practically the only variety offered on the Los Angeles market. The advantages of this corn over all others are its earliness, its large size, rarely less than eight inches long. The grains are full to the tip and delicious.

A & M Early Adams This is a blend between the Oregon Evergreen and the Eastern Extra Early Adams. The superiority of this strain over the former eastern-grown Adams is shown in its earliness, large size and sweetness. It is nearly as good as the Oregon Evergreen, and it is earlier and hardier. It is one of the many good things that originated here. Although it may be frost-killed when six inches high it will come again. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

A & M Large Adams This is the best market variety to plant in August for late crop. It will mature in fifty-five days. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

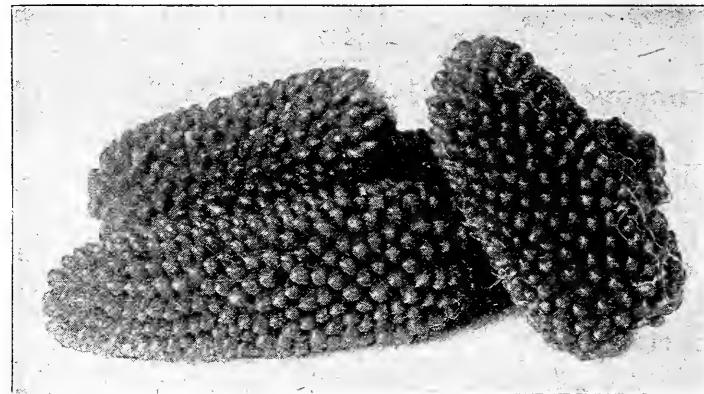
Golden Bantam Probably the very earliest variety grown. Very sweet, none better for the home garden for first early. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Country Gentleman A delicious sweet corn. The ears showy than the coarser varieties, but for private family use, where quality is preferred to size, it is excelled only by the Golden Bantam. The cob is very small, giving great depth to the kernels. The great merit of "Country Gentleman" is its fine quality. It matures in ten weeks. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Stowell's Evergreen If planted at the same time with earlier varieties and at intervals of two weeks until July 1st, it will keep the table supplied until November. It is hardy and productive, very tender and sugary, remaining a long time in a fresh condition. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Black Mexican One of the best sweet corns for this section. Deliciously sweet and tender very productive. (Pkt. 10c) (1/2 lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Pop Corn



Doll Pop Corn

Rice Sharp pointed grain is preferred by vendors, but is not profitable to grow here at the usual price because of the devastations of the worm. (Per pkt. 10c) (lb. 30c) (10 lbs. \$2.50) prepaid.

Pearl This is the variety so extensively grown locally. It yields enormously and at the present price is very profitable. (Pkt. 10c) (lb. 30c) (10 lbs. \$2.50) prepaid.

Yellow Large smooth grains of Golden Yellow Color. It pops large, has excellent flavor and is the most profitable to grow. (Pkt. 10c) (lb. 30c) (10 lbs. \$2.50) prepaid.

Doll Pop Corn The best of all for the home garden. The commercial pop corn roaster prefers it, saying it is the best of all, but he cannot get enough of it because the comparative yield is small, therefore, not profitable to grow in large acreage. But for the home it is very much excels all other varieties. (Pkt. 10c) (1/4 lb. 20c) (lb. 50c) post-paid.

FARM and HOME DRYING of FRUITS and VEGETABLES The Bureau of Plant Industry, United States Department of Agriculture, has issued Farmers' Bulletin 984, "Farm and Home Drying of Fruits and Vegetables," by Joseph S. Caldwell.

The bulletin may be had without cost by writing Division of Publications, United States Department of Agriculture, Washington, D. C. Also, consult your local Farm Bureau.

Throughout the year we reply to thousands of inquiries for advice on every subject pertaining to Agriculture. We are always on the lookout for any new thing that may benefit the ranchers, and freely give the information.

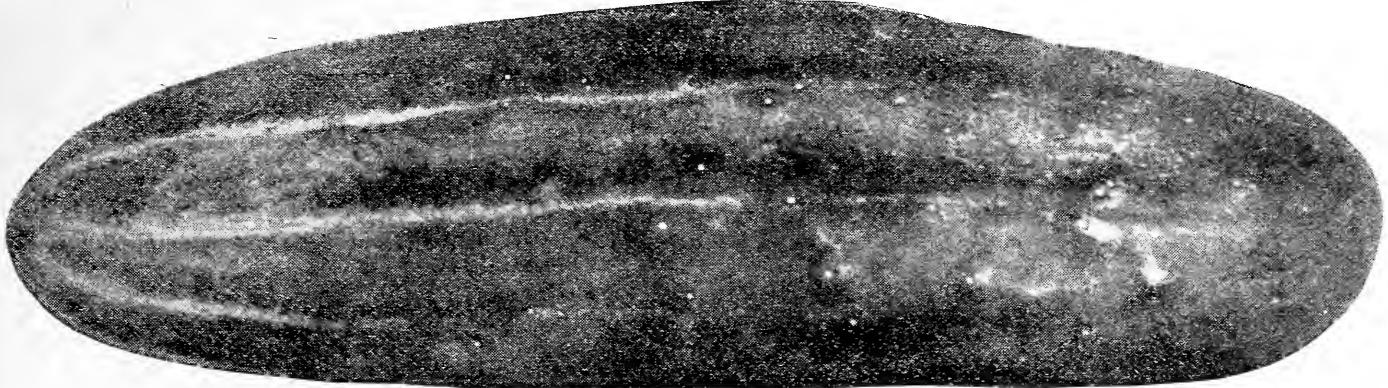
We first advocated Progressive Dry Farming methods in 1902. We recommended the planting of legumes for green manuring and advised inoculation in 1905. We are now advocating the use of sulphur with lime as a fertilizer and to eradicate fungi and microscopic germs from the soil.

A & M Cucumbers

Culture for hot-bed: Make the frame eight feet wide and as long as is desired, using 12 in. boards. Select a place with good loamy soil on a sunny slope. Mix the soil almost half and half with horse manure. About February 1st sow liberally with seed, in hills three feet apart each way. Stretch wire over the frame across and lengthwise. Sew muslin in widths and lengths to cover frame. Arrange to roll the mus-

lin on a stick as a curtain. Cover each evening, and open each day.

Field Culture—Plant from March to October in hills 4 to 6 feet each way, 8 to 10 seeds to a hill. Cover an inch deep. When danger of insects is past, thin out the plants, leaving 3 or 4 of the strongest in each hill. It is ready for the table in six weeks from planting seed. One ounce of seed will plant 50 hills; two pounds to the acre.



Klondike Cucumber

Klondike This cucumber has steadily grown into favor since we first offered it. It is the one variety that made carload shipments possible because it is firm, dark green color, and stays green until consumed; turns neither white nor yellow with age, but stays green. It is a desirable size, just 7 to 8 inches long, symmetrical in shape, and especially crisp and palatable. It is an excellent variety for pickling when young, as well as desirable for the market. (Pkt. 10c) (oz. 20c) (1/4 lb. 60c) (lb. \$2.00) postpaid.

Davis Perfect This is the ideal cucumber. Long, slender, dark green, tender and crisp. It is the best all around cucumber yet offered for the family garden, and the hot house. Do not hesitate to plant this variety. (Pkt. 10c) (oz. 25c) (1/4 lb. 85c) (lb. \$2.00) postpaid.

White Spine A popular, early variety for slicing. Very prolific, crisp and excellent for pickling when young. (Pkt. 10c) (oz. 20c) (1/4 lb. 65c) (lb. \$2.00) postpaid.

Improved Long Green Dark green, firm and crisp; ten to twelve inches long, a favorite with home gardeners. Hotel trade like a long cucumber for slicing; this is ideal for such purpose. (Pkt. 10c) (oz. 25c) (1/4 lb. 85c) (lb. \$2.50) postpaid.

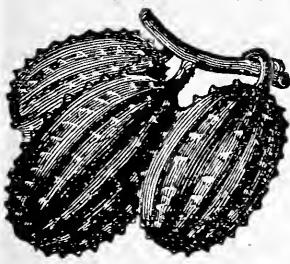
Japanese Climbing Cucumber This variety should be grown more extensively; it is equal to others in quality and can be grown more economically in a small garden by planting near a fence or trellis of any kind, and climbs by tendrils as a grape vine. Whether space is a factor or not, we recommend it. (Pkt. 10c) (oz. 20c) (1/4 lb. 65c) (lb. \$2.00) postpaid.

Everbearing Cucumber This variety is entirely distinct from all others on account of its close, bushy growth and everbearing character. The first cucumbers are ready very early and the vines continue to flower and produce fruit continually until late in the season, whether the ripe cucumbers are picked off or not, differing in this respect from all other varieties of cucumbers in cultivation. A single vine will show at the same time cucumbers in every stage of growth, the smaller ones being perfect in shape, of a fine green color, just the right size for pickling. As they grow larger they are entirely satisfactory as a slicing cucumber.

We recommend this to be planted in home gardens at all times, but especially in September. (Pkt. 10c) (oz. 20c) (1/4 lb. 65c) (lb. \$2.00) postpaid.

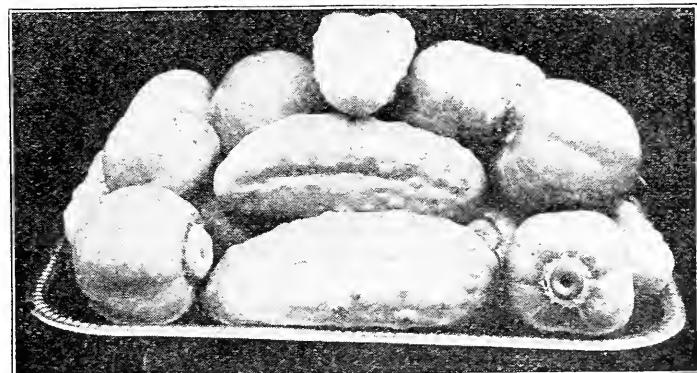
Chicago Pickling This is the variety that is grown for the Los Angeles pickling factories. Thirty-five carloads were shipped in, possibly as many more came by auto truck. Our seed has given these growers satisfactory results for years.

This variety is chosen because of its delicious quality and its shape, being one inch thick and three inches long when at pickling size. It is enormously prolific, bearing in clusters. We can recommend it for the home garden. (Pkt. 10c) (oz. 20c) (1/4 lb. 65c) (lb. \$2.00) postpaid.



SMALL GHERKIN.

Gherkin This cucumber is the most delicious of all the cucumber family when properly pickled. It should be more extensively grown. Planted where it may climb on a trellis, one vine will cover a section of fence eight feet high and twelve feet wide, producing possibly a thousand or more of the delicious and oddly shaped gherkins. It should be planted to shade a window or back porch. (Pkt. 10c) (1/4 lb. 90c) postpaid.



Lemon and Salad Cucumbers

THE SALAD CUCUMBER

(See Cover Page)

For this novel Cucumber we are indebted to Mrs. T. P. Mony, who had only a few seeds which she sent to us three years ago that we might grow some and if we thought it worth while we should offer it to our many customers.

This Salad Cucumber has the same delicious flavor of the now well known Lemon Cucumber. It has the shape of the Arlington White Spine but a bright yellow color.

We are sure that if every home garden would have a plot of this Salad Cucumber this season, few gardens would again have the green variety.

We advise using them when they have a light green or lemon color, but they are just as good when the color is bright yellow. There is never a bitter one. We are sure that any gardener will have no trouble to convince the buyers for cafeterias, exclusive hotels and clubs that this cucumber is superior to others and having done so will make a large income supplying them.

Mrs. Mony writes: "I consider it unexcelled for any purpose for which cucumbers are used. It makes delicious pickles. I felt it was too little known and needed to be put on the market that others might enjoy it."

Mrs. Mony is right in her testimonial and just as right in her kindly wish that others may enjoy this delicious Salad Cucumber.

The vines are very vigorous and enormously productive.

Be sure to plant a packet of seed.

To the market gardener we advise planting a small plot and convince the large buyers that it is better.

We consider this a good opportunity for the man with a small acreage to make a good income by selling this cucumber to some exclusive club or hotel. (Pkt. 10c) (oz. 30c) (1/4 lb. \$1.00) (lb. \$3.00) postpaid.

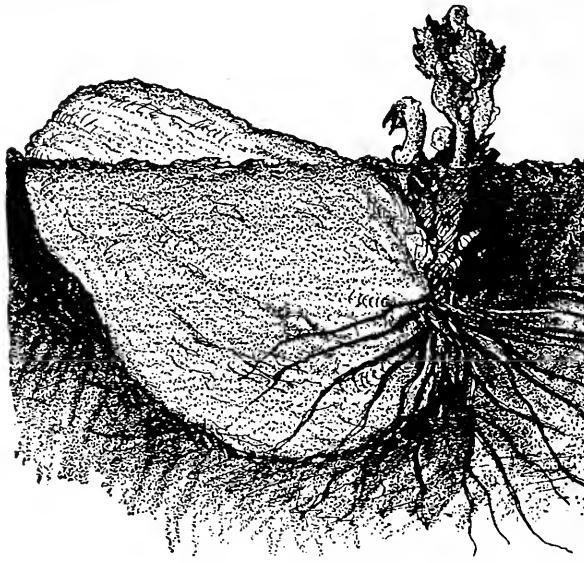
Lemon Cucumber At last after years of advertising and effort to educate the home-gardener to grow the Lemon Cucumber instead of the common long green type, we can now say that at least half the people are awake to the superiority of this delicious salad, and the other half will soon regret not having tried it earlier. Every one who has tried it is unanimous in its praise, and would not think of omitting it from the spring garden. It is the color of a lemon when ready to use, and similar in shape, being less pointed at the ends.

There is nothing but praise for the Lemon Cucumber. It may now be found at almost any vegetable stand, and no home garden should be without it. (Pkt. 10c) (oz. 30c) (1/4 lb. \$1.00) (lb. \$3.00) postpaid.

A & M Chayote

Write Dept. of Agriculture, Washington, D. C., for Circular No. 286.

The circular describes it fully and also gives cultural directions and recipes for cooking and serving. It can be had by sending five cents to the Superintendent of Documents, Government Printing Office, Washington, D. C., and asking for Circular No. 286.



Chayote as it Should be Planted

The Chayote is no longer a novelty. It has now become an article of commerce. It may be found on sale at every grocery store throughout the season, which lasts from October until March.

The vine is a rampant grower. The first year from seed it will grow twenty to thirty feet. Destroyed to the ground by frost, it soon sends out new growth, and during the second season will extend vines forty or fifty feet in every direction. During September it starts blooming, having a small, white, insignificant flower. Within four weeks the fruit is large enough for the table. One vine in two years if properly trellised will produce more than one thousand fruit.

Cultural Directions One fruit envelopes one seed, which sprouts from the large end. Plant where you intend it shall grow. Cover only the large end, leaving the small end exposed. (See picture.) Or let the fruit lie around until it has well sprouted, and then plant the seed, leaving the sprout well above ground. Water freely and do not be alarmed if frost should destroy it. A new shoot will soon appear. Give it abundance of water throughout the hot summer season.

Because of many complaints of failure to get them started we offer them already rooted. Rooted vines 50c each postpaid. One Chayote not rooted 35c postpaid. At the counter, rooted, 25c; not rooted, 20c.

Recipes for Cooking the Chayote

Parboil, chop and casserole with tomato, onion and green peppers.

Fry as egg plant. Prepare as summer squash.

Use small ones, without peeling, boil until tender, cut in half, put a lump of butter, a little sugar, salt and pepper on each one. Put in oven a few minutes.

For larger ones: Peel and cut into cubes and boil; when done, drain, add butter and seasoning and fry in pan. Let simmer until butter burns. Just before serving put tablespoonful of vinegar on them.

Parboil young ones and serve as salad with mayonnaise dressing or with boiled dinner as turnips.

Spanish Style: Can be cooked Spanish with tomatoes and chili or bake in roasting pan with meat.

Breaded: Also to boil until tender, slice, dip in egg and cracker crumbs and fry it.

Chayote Pudding: Boil the Chayote, mash, and rub through a sieve. To one and one-half cupfuls add one-third cupful sugar, one well beaten egg, two powdered soda crackers, one teaspoonful ground ginger, one teaspoonful of lemon extract, and one tablespoonful of butter. Mix well, turn into a greased pan and bake. This is delicious, try it.

Chayotes cooked with sliced lemon, and sugar to sweeten well, make a fine "apple" sauce, one can scarcely tell the difference.

Mrs. A. de la Mix, Nalaehu, Kauai, T. H., writes that the Chayote was grown in Portugal from time immemorial and its Portuguese name is Pipinola. She also advises that when peeling, hold the hands under water as the liquid stains and draws the skin, but does no lasting harm.

A Word About Cucumbers

Planted from September 1st to 15th, in a sheltered place, will produce delicious cucumbers all through December and late into January. This has been done frequently, but so much depends upon the changeable climatic conditions each season that there is always a risk of failure, but it is worth a trial because the expense is small compared with the profit if you succeed. Six hundred dollars from one acre of cucumbers during the month of December is easily possible.

To prolong the vitality of your vines, pick all of marketable size every other day, and do not tread upon the vines when picking. To grow prize cucumbers, mix a handful of nitrate of soda with the soil about the hill when planting, and more as the vine grows.

A & M HERBS

Herbs in general, delight in a rich, mellow soil. Sow the seed any time throughout the year, in shallow drills one foot apart; cover lightly with fine soil, and when up a few inches, thin out to proper distances apart, or transplant into prepared beds. Care should be taken to harvest properly; do this on a dry day, just before they come into full blossom. Dry quickly in the shade, pack in bottles or boxes to exclude the air; this will insure their being preserved in good condition for future use.

PLANT DILL

Every year there is such a demand for green dill that the supply is short of the demand. Plant in any quantity, from ten feet square to one acre, but not more. Make several plantings to have it drag along, and sell what you can of the green dill and dry the balance.

Aromatic and Medicinal Herb Seeds

Anise—Used as a cordial and for garnishing and flavoring Seeds have an agreeable aromatic taste. (Pkt. 10c) (oz. 35c).

Basil—Sweet. The leaves are used for flavoring soups, stews and highly seasoned dishes. (Pkt. 10c) (oz. 50c)

Borage—The leaves are used for flavoring and the flowers furnish bee pasture. (Pkt. 10c) (oz. 50c)

Caraway—Grown for the seeds, which are used extensively for flavoring of bread, pastry, etc. (Pkt. 10c) (oz. 25c)

Catnip or Catmint—The leaves are used for seasoning. It also makes an excellent bee pasture. (Pkt. 10c)

Chervil—Used in soups and salads. (Pkt. 10c) (oz. 15c)

Coriander—The seeds are used in the manufacture of liquors and confectionery. (Pkt. 10c) (oz. 25c)

Dill—The seeds have an aromatic odor and warm, pungent taste. They are used as a condiment and also for pickling cucumbers. (Pkt. 10c) (oz. 25c)

Fennell—Sweet. The boiled leaves are used in sauces. (Pkt. 10c) (oz. 30c)

Marjoram—Sweet. The leaves and the ends of the shoots are esteemed for seasoning in summer and are also dried for winter use. (Pkt. 10c) (oz. 75c)

Rosemary—The aromatic leaves are used for seasoning. (Pkt. 10c) (oz. \$1.00)

Sage—The most extensively used of all herbs as a seasoning for dressing. (Pkt. 10c) (oz. 75c)

Summer Savory—A hardy annual. The dried stems, leaves and flowers are extensively used for flavoring—particularly in dressings and soups. (Pkt. 10c) (oz. 75c.)

Saffron—Used for flavoring. (Pkt. 10c)

A & M COLLARDS

The Collard is an old-time favorite, adapted to all parts of the South, and as a producer of "greens" during winter and spring it has no equal. It will pay you to have a collard patch just to feed the chickens.

Southern Georgia This variety is the old-time favorite. Stands all sorts of adverse conditions without injury. Is very hardy. In many places where the soil is too poor to grow cabbage, the collard grows easily, and makes a good substitute for cabbage. (Pkt. 10c) (oz. 20c) (1/4 lb. 60c) (lb. \$2.00) postpaid.

A & M CRESS

Pepper Grass Sow curled or pepper grass thickly, in shallow drills, every two or three weeks. It should be cut often, and will continue to grow. It is used not only for salad, but on the breakfast table and for garnishing. Used with lettuce its pungency adds an agreeable flavor. (Pkt. 10c) (oz. 15c) (1/4 lb. 50c) (lb. \$1.50) postpaid.

True Water Cress Should be sown in damp soil or if a stream of water can be utilized, it would be much better. It will also thrive well in damp cold frame. Rightly managed, its culture is very profitable. (Pkt. 10c) (oz. 60c) (1/4 lb. \$2.00) postpaid.

A & M CORN SALAD

Sow any time from October 1st until February. Plant and cultivate the same as lettuce. It is hardy in this climate. It is used for garnishing in the same manner as parsley or cress. (Pkt. 10c) (oz. 30c) (1/4 lb. \$1.00) postpaid.

CHERVIL

Curled Chervil Seed should be sown only during the cooler months in rows 15 to 18 inches apart and thin to 4 to 6 inches apart in the rows in good garden soil. Chervil is used for garnishing and flavoring. (Pkt. 10c) (oz. 40c) (1/4 lb. \$1.35) postpaid.

A & M CHICORY



WITLOOF CHICORY.

Large Rooted

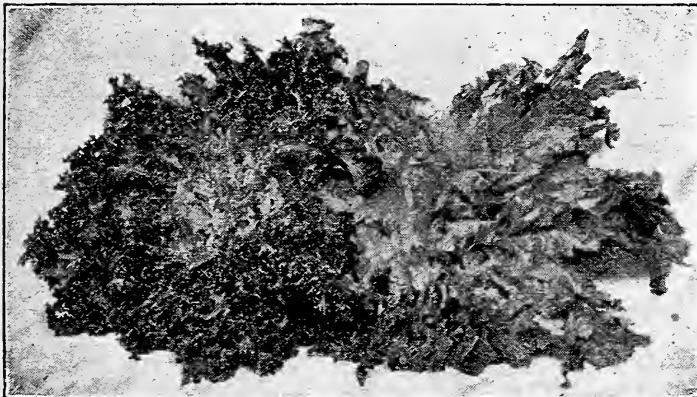
The roots, dug in the fall, dried, cut in thin slices and finely ground, are used largely as a substitute for coffee. Seed should be sown quite thinly in shallow drills early in the spring. When well started, thin out to stand two or three inches apart in the row and give good cultivation all summer. (Pkt. 10c) (oz. 40c) ($\frac{1}{4}$ lb. \$1.35) (lb. \$4.00) postpaid.

Witloof Sow the seed in deeply prepared ground during June, July and August. Thin out to four inches apart in rows twelve inches apart. In December make trenches ten inches deep and twelve or fifteen inches wide, and loosen the soil for ten or twelve inches deeper. Set the roots three inches apart in rows eight inches apart, within the

trench, so the tops of the roots are eight inches below the top of the trench. Then fill with a mixture of sand and humus, water thoroughly. In two to four weeks tender heads will form and be ready for use as a salad with French dressing.

This is a most delicious salad, and many Eastern growers are making a specialty of it, selling to hotels at fancy prices. We suggest it to mushroom growers, believing it will go nicely hand-in-hand with the growing and marketing of mushrooms. (Pkt. 10c) (oz. 40c) ($\frac{1}{4}$ lb. \$1.35) (lb. \$4.00) postpaid.

A & M ENDIVE



Golden Heart

Batavian

Culture—Same as for lettuce. Seed may be sown any time during the year. When plants are well started, thin out to ten inches apart or they may be transplanted. When plants have reached a good size, gather the leaves closely together and tie loosely in an upright bunch. This blanches the inner leaves in about ten days and adds to the crispness as a salad, as it renders the flavor mild and delicate. One ounce will sow 400 feet of row.

This plant furnishes an attractive and appetizing salad for the fall and winter months; by repeated sowings a supply may be had nearly all the year 'round.

Endive is now largely grown for the shipper. Its field culture is the same as for lettuce and it is sown about the same time.

Green Curled Golden Heart Leaves are finely curled or lacinated, giving the plants a rich, mossy appearance, which is greatly enhanced when the centers are nicely blanched.

This is the variety generally preferred because it blanches to a beautiful golden yellow. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid.

White Curled This beautiful variety does not need blanching to prepare it for use, the midribs being naturally of a pale, golden yellow, the finely curled leaves are almost white. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid.

Batavian or Escarol Forms large heads of broad, thick leaves, which can be blanched for a salad or it will make excellent cooked greens, as well as being useful to flavor soups, stews, etc. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid.

A & M EGG PLANT

Market:—The sale of Egg Plant does not compare favorably with other produce, and the consumption is not large. It is owing to the productiveness of the Egg Plant which makes it at all profitable during the season of abundance. A small acreage yields enormously, but it is the very early Egg Plant which makes a profit, such as \$1000.00 per acre. May and June are considered early.



New York Improved Spineless Egg Plant and mature marketable fruit the following May. Egg Plants require four to six months to mature. One-fourth pound of seed is sufficient to plant an acre.

New York Improved This variety has superseded all others, both for market and home use. The large size and high quality of its fruit and its extreme productiveness make it the most profitable for the market gardener. It is spineless, which is a great advantage in shipping. (Pkt. 10c) (oz. 75c) ($\frac{1}{4}$ lb. \$2.50) (lb. \$7.50) postpaid.

Black Beauty Is preferred by growers for the early market because it matures marketable size fruit earlier than any other variety, and because the fruit is dark colored, when quite young and uniformly over the entire surface. It is entirely free from spines. It is popular because it is a moneymaker. (Pkt. 10c) (oz. 75c) ($\frac{1}{4}$ lb. \$2.50) (lb. \$7.50) postpaid.

The Tree Egg Plant



This variety is of medium size and extremely good shape, being particularly adapted to slicing, as there is no waste of material. It resists drouth and bad weather to a wonderful degree, partly on account of its strong, upright growth. It bears its fruit sometimes one or two feet above the ground, thus escaping liability to rot. It is very satisfactory for the home garden. (Pkt. 10c) (oz. 75c) ($\frac{1}{4}$ lb. \$2.50) ($\frac{1}{2}$ lb. \$4.00) (lb. \$7.50) postpaid.

Tree Egg Plant

GOULD



Culture—Gourds are tender annuals, of trailing or climbing habit. The seed should not be planted until the ground is warm. Plant in hills and cultivate as cucumbers. Leave only two plants in a hill, and allow the vines to ramble or train over a trellis for shading windows.

Dish Rag Gourd The peculiar fibre within the gourd gives it its name. The fruit grows about one foot long. The interior fibre is serviceable for a variety of household purposes, being used as a dish cloth, or sponge. The fibre is tough, elastic and durable. (Pkt. 10c).

Mock Orange A good old sort, finding its way into the family sewing basket. A beautiful and rapid climber, quickly covering trellises. (Pkt. 10c).

Hercules Club This often grows to a length of four feet. Butter Bean which it resembles. (Pkt. 10c)

Dipper.—Bowl with long handle. (Pkt. 10c).

Bottle.—Bowl with short handle. (Pkt. 10c).

Pipe.—Often made into pipe for smoking tobacco. (Pkt. 10c).

Ornamental.—Small odd shapes and colors. (Pkt. 10c).

Nest Egg.—(Pkt. 10c).

Mixed Gourds.—(Pkt. 10c).

The Mexican knows the value of the Gourd for arbor purposes. It is a rampant grower in this climate. The Gourd is used for as many purposes as it has shapes. Bowl, dipper, pipe, trough, nest egg, bottle, dish-rag and ornamental.

Buy a packet of mixed Gourds.

Edible Gourd



New Guinea Butter Bean as an Arbor
AN EDIBLE GOULD
Plant Same as any Gourd

Lately advertised as New Guinea Bean. Has been a common table vegetable in China from time immemorial.

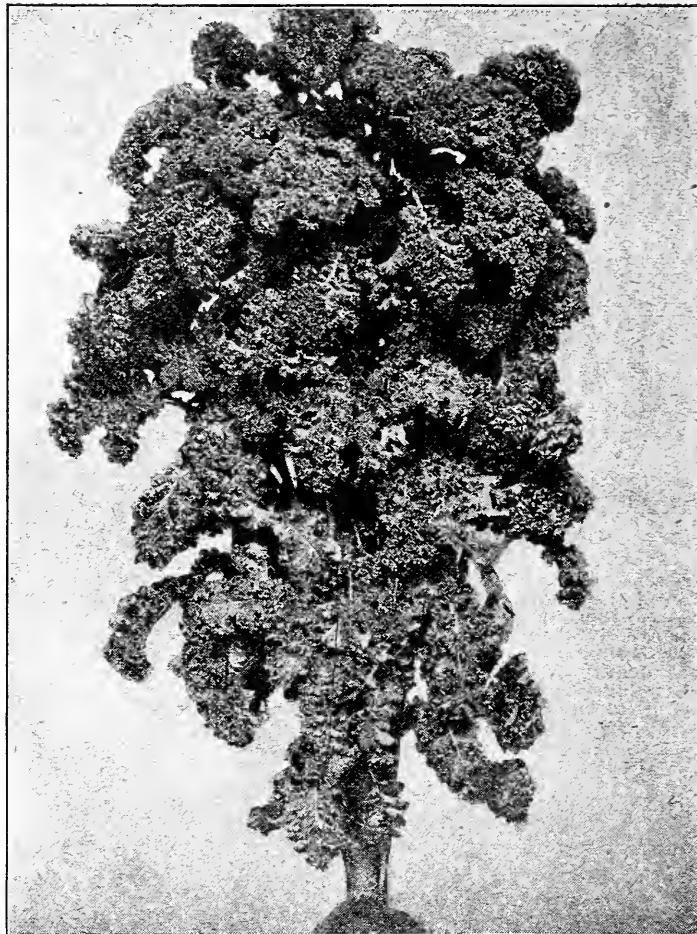
All of us have curiosities and many persons have reported to us how "Good is this New Guinea Bean." We tried it and sure enough we found it even better than the most delicious marrow. (Pkt. 10c) (oz. 30c) (1/4 lb. 90c) postpaid.

Recipe: Take fresh from the vine a young gourd about sixteen inches long and three inches in diameter or smaller, while the fuzzy growth is yet on. Cut into cubes about $\frac{3}{4}$ inch, bring to a boil, pour off the water once or twice. Season well with pepper and salt, add butter. You will be surprised how good it is.

"I planted some of your New Guinea Beans last summer and they made absolutely the best shade I ever saw. Here is a new way to cook them—Use the ones from 8 to 14 inches long. Wash them. Wipe dry. Cut the round way. Dip in batter then in flour and in batter again. Fry until tender. They are delicious. To make the batter use one egg, one tablespoon flour, and one cup milk with salt and pepper."

MRS. CHARLES GLOVER, Glendale, Calif.

A & M KALE



Tall Scotch Kale

Culture—Seed should be sown thinly in drills, about the middle of June for the tall sorts; transplant the young plants twelve inches apart in rows three feet apart. Later in the season the dwarf sorts may be sown rather thickly in drills to furnish small heads to be cooked like spinach. One ounce to 100 feet of drill.

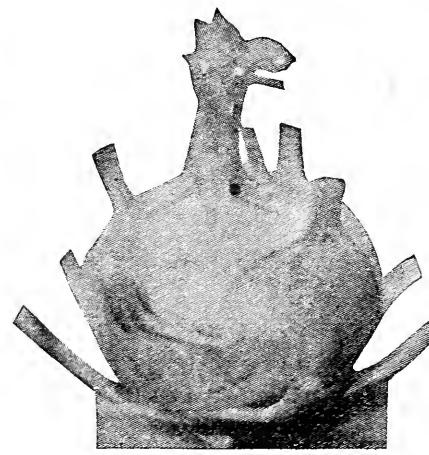
Tall Scotch This makes a beautiful plant, 3 to 8 feet tall. (Pkt. 10c) (oz. 25c) (1/4 lb. 65c) (lb. \$2.00) postpaid.

Jersey Kale A tall variety with smooth leaves. Especially used for poultry greens. (Pkt. 10c) (oz. 20c) (1/4 lb. 45c) (lb. \$1.25) postpaid.

Siberian or Thousand Headed Kale We believe this to be superior to other varieties because it grows more greens for poultry, and is of better flavor for the table. (Pkt. 10c) (oz. 20c) (1/4 lb. 50c) (lb. \$1.50) postpaid.

There is no better green feed for poultry nor none more easily grown. It may be transplanted at any vacant place in the garden.

A & M KOHL RABBI



A & M Kohl Rabbi

Culture—Seed may be sown every month in the year. Drill on ridges same as beets. Thin to three inches apart. An ounce of seed will produce 2000 plants.

Early White Vienna

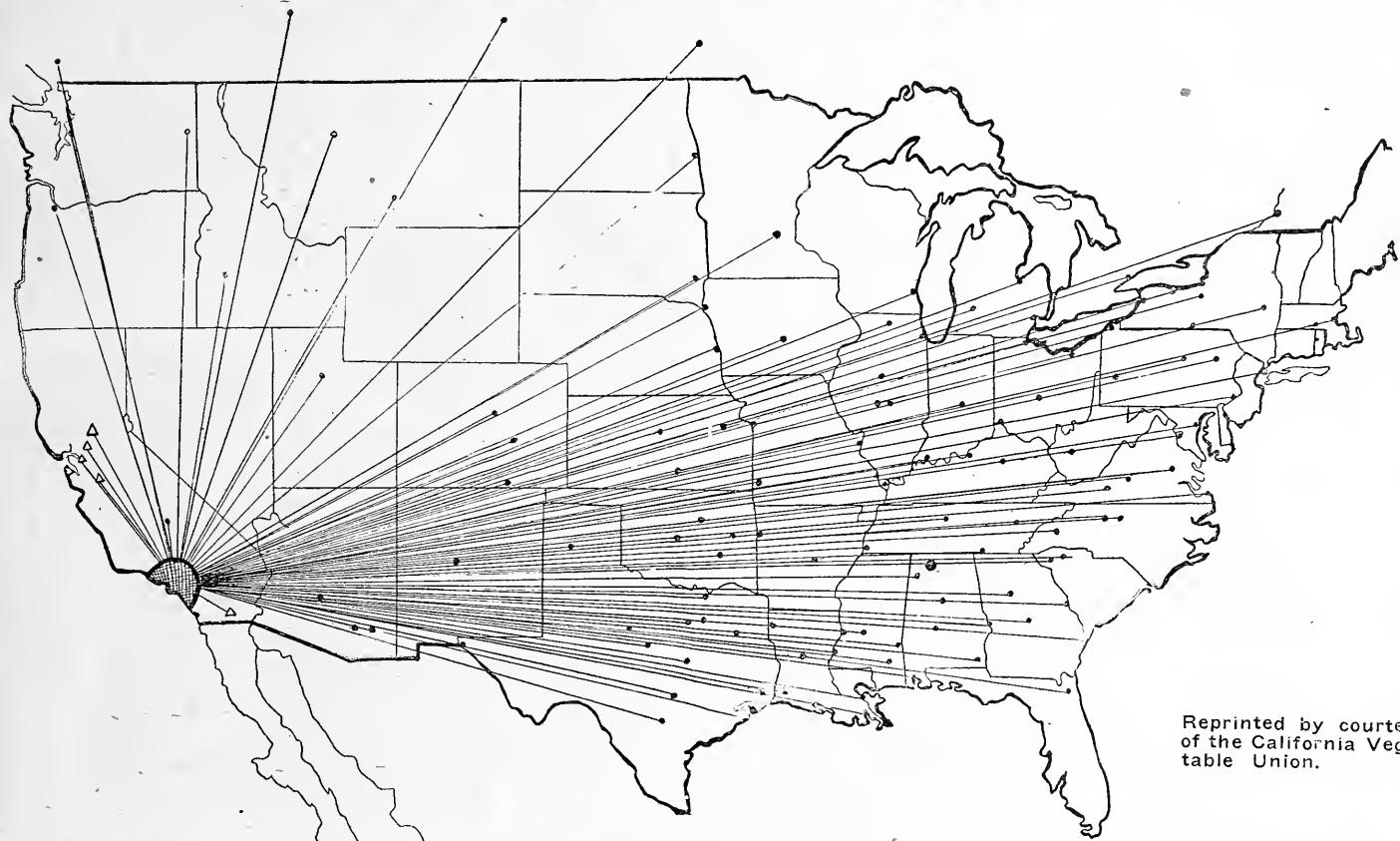
The earliest sort, very tender, excellent for table use. (Pkt. 10c) (oz. 30c) (1/4 lb. \$1.00) (lb. \$3.00) postpaid.

Early Purple Vienna

Similar to above, but has flesh of purple color. (Pkt. 10c) (oz. 30c) (1/4 lb. \$1.00) (lb. \$3.00) postpaid.

A & M Leek We believe in having the best of everything. With this idea always before us, we have secured this fancy strain of leek. It is large, white, tender and mild—the best in the world. Its mild, delicate flavor makes a delightful addition to lettuce salad. (Pkt. 10c) (oz. 35c) (1/4 lb. \$1.15) (lb. \$3.50) postpaid.

OUR BACK DOOR MARKET



Reprinted by courtesy
of the California Vegetable Union.

During the year 1904 an extensive manufacturer from Eastern Pennsylvania visiting California, remarked to the writer: "Los Angeles never can become a large city. In the first place you have no fuel; second, you have no water; third, you have no back-door market, west or south you have nothing but climate."

Our reply was that "Climate is all we need" (and I drew a mental picture like the above saying that) Southern California is a winter garden with the entire United States for a back door market."

We now in 1924 have the fuel, the water, the large city with its factories its harbor and everything that goes with the building of a large city of more than 1,000,000 people.

Neither have we neglected the back door market. The fruit and vegetables shipped to this back door market amounts annually to several hundred million dollars. Can you imagine 25,000 carloads of lettuce with approximately \$15,000,000, the annual value of this one item?

Can you imagine \$2,000,000 worth of peppers, a similar amount of cabbage, cauliflower, celery, potatoes, tomatoes, onions, melons and thousands of carloads of mixed vegetables?

Can you imagine \$70,000,000 worth of Oranges, and half that amount in grapes and walnuts. All going to the back door market according to this above map?

A & M LETTUCE

In 1906 we started this enormous industry that now out-classes in acreage and monetary value every other vegetable that is grown in California.

In 1916 there was shipped from Imperial Valley 28 cars. In 1923 there was shipped from the same valley 7,726 cars. But this does not tell all. Other large shipping centers have grown in like proportion. Enormous acreage is grown in San Fernando Valley and throughout Southern and Central California and in the Sacramento Valley. Oregon, Idaho, Tennessee, Texas and Florida are all now growing the Los Angeles Market Lettuce.

Credit must be given to the purity of our seed for building up this enormous business and the wise grower will prefer our dependable seed rather than buy seed that has no pedigree. He cannot afford to do otherwise.



CULTURE (See Picture)

Lettuce is very exacting as to soil requirements. It is best suited to a rich, light loam, and should never be planted on soils of poor quality. Irrigation is necessary throughout the entire growing period, except during the rainy season, but the crop is easily ruined by an excess of water. The crop stands 32° of cold better than high temperature, and in many

of the interior valleys of the state it is impossible to raise lettuce of good quality during the summer.

At the time of planting the soil should be rich and in the best physical condition. Many growers each year plant cowpeas during the summer period when they cannot grow lettuce in order to enrich the soil and put it into good condition.

The plants should be grown on ridges six inches high, fifteen inches wide on top and eighteen inches between ridges. Sow the seed with a hand planter two rows on a ridge and thin out leaving one plant every twelve inches.

Water should be run between the ridges and not flow over the tops, and should never be allowed to cover the plants. There should always be an adequate amount of moisture in the soil from the time the plants have commenced to head until they have matured. The hoeings necessary on raised beds will vary from one to three times. The earth around the plants should not be allowed to harden.

In the interior valleys and especially in Central California plants set in the field during September should mature during December.

It requires 90 to 100 days to mature large solid heads.

The mistake is sometimes made of cutting the heads before they have attained their full development and the quality and size, which are of great importance, suffer as a result of cutting the immature heads. On the other hand, if the heads are allowed to remain in the field too long they may deteriorate. Growers should never attempt to cut all the heads in a field at once as they do not all reach the best stage for marketing at the same time. It will usually be necessary to go over the field three or more times for best results.

THE STANDARD BEDS AND FURROWS FOR IRRIGATED HEAD LETTUCE AND OTHER CROPS VARY TO SUIT CONDITIONS

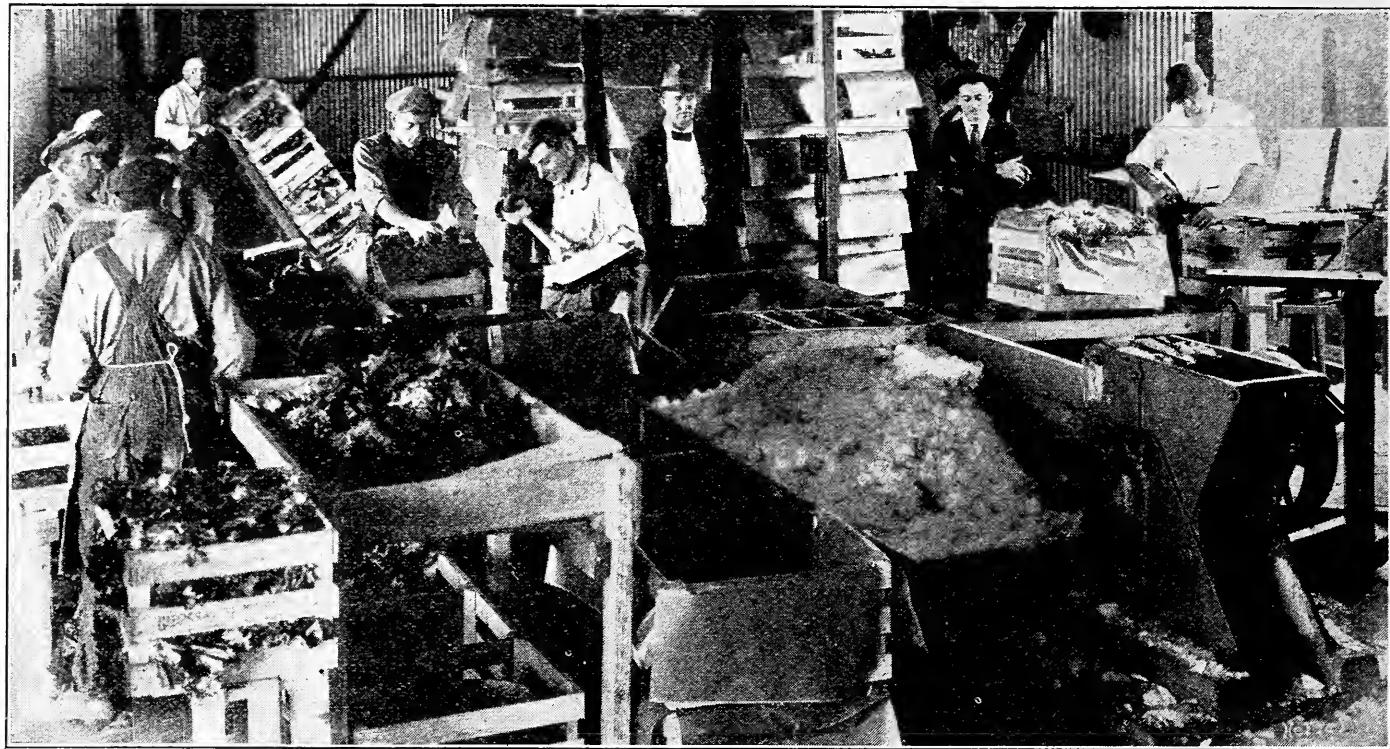
Planting on ridges facilitates irrigation and drainage as well as aeration of the soil. It makes it possible to confine the water to the furrows and thus avoid flooding the surface.

Practices of growers in different sections vary considerably, but as a general thing the standard method as shown here is satisfactory. Some favor rows fourteen inches apart on beds twenty inches wide, and where horse-drawn cultivators are to be used, twenty-two inch furrows, making the distance from center to center of furrows forty-two inches.

A & M Lettuce

(See back cover)

If you are growing lettuce for the shipper, ask for circular of cultural instructions.



In response to numerous inquiries concerning the shipping of lettuce, we are including this picture which shows the kind of crates, method of icing and packing. The size of crates are inside measurements $17\frac{1}{2} \times 23\frac{1}{2} \times 13$ in. deep.

A & M LOS ANGELES MARKET OR NEW YORK SPECIAL (See back cover)

This is the variety that has made Los Angeles the richest agricultural county in the United States. We introduced this lettuce and started the long distance shipping when we shipped the first crate to Philadelphia in 1904.

It is the largest and most solid heading variety in existence, often weighing $2\frac{1}{2}$ and 3 pounds a head and always a prize winner. N. H. Cramer writes from Florida: "I took first prize at the St. Lucie County Fair with your Los Angeles Market Lettuce. I am sending some to the fair at Tampa and expect to get the prize there."

The big planting time is during September and October when the new seed has just been harvested. This new seed germinates so irregularly that planted during September it will keep coming up until January. On this account we always have a supply of seed carried over from the previous season which germinates quickly and uniformly. Our seed has such a reputation for reliability that many growers will have no other. (Pkt. 10c) (oz. 50c) ($\frac{1}{4}$ lb. \$1.65) (lb. \$5.00) postpaid.

Iceberg This is next to Los Angeles Market as the heading variety for the Southwest for the summer planting. Of course it is better during the winter months, but not so solid as the Los Angeles Market, which is strictly a winter variety, while the Iceberg is a good all-season lettuce, and hundreds of carloads of Iceberg are being shipped when the other is not available. Iceberg Lettuce planted later than March 1st should be grown on dark, heavy soil, because if grown on light, sandy soil, the heat of the sun reflected from the sand on the under side of the leaves causes them to burn almost to the heart.

The light green, curled, red-tinged leaves of the Iceberg form heads as large as the Los Angeles Market, but not so solid, but it is as tender and crisp, and is of excellent flavor. (Pkt. 10c) (oz. 30c) ($\frac{1}{4}$ lb. \$1.00) (lb. \$3.00) postpaid.

Hanson Without exception this is the best variety for late spring and mid-summer crop. Prof. F. W. Mally, Farm Demonstrator of Webb County, Texas, discovered Hanson Lettuce to be resistant to both heat and disease, and particularly resistant to eel worm which is often prevalent where least expected. Hanson Lettuce is similar to the Iceberg Lettuce, except that it has not the tinge of red. We recommend it for the home garden. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid.

NOTICE, POULTRYMEN!

Chicken Lettuce A rapid growing lettuce, of very tender blades when quite young, excellent for the table when the blades are from four to six inches high. We advise sowing thickly that it may be thinned out for table use. Thin to eight inches apart. When about twelve to eighteen inches high, cut the plant about three inches above the ground for the poultry. Several sprouts will quickly grow again. A very small plot of ground will afford a great quantity of lettuce. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 50c) (lb. \$1.50) postpaid.

This Los Angeles market Lettuce is often called the Iceberg. It is not the Iceberg. The Iceberg Lettuce is a very loose heading variety with a decided red tinge on the foliage.

On one occasion a large grower ordered Iceberg Lettuce and got what he ordered but not what he wanted and thereby sustained a heavy loss.

The Los Angeles Market is also called the New York Lettuce and in many localities it is known by no other name.

It was named the Los Angeles Market Lettuce when we introduced it in 1904. It was five years later called New York Lettuce by a New York Seed house. According to the history of this lettuce it should appropriately be called the Los Angeles Market Lettuce. Our California shippers should see that no other name is applied.

"Los Angeles Market Lettuce does wonderfully in Maine climate, cool nights, forming solid heads the size of a small cabbage. We consider it the finest of all lettuce."

MRS. J. M. SEYMOUR, Maine.

Early Curled Simpson This is a very popular variety as a loose leaf lettuce. The leaves are large, thin, very tender and of a very good quality. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 50c) (lb. \$1.50) postpaid.



Paris White Cos (Romaine)

Paris White Cos (Romaine)

This might well be spoken of as the "Aristocrat" for the reason it is used almost exclusively at aristocratic clubs and hotels for salads, because it is crisp and has a delicious, nutty flavor.

Gardeners would profit to give more attention to this variety. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 60c) (lb. \$1.75) postpaid.

Big Boston Very large, smooth-leaved, solid-heading variety grown extensively throughout the east and south. It is congenial to all climates, and is a good shipper. In flavor it probably excels all other smooth-leaved varieties. An excellent all-year 'round lettuce. (Pkt. 10c) (oz. 25c) ($\frac{1}{4}$ lb. 85c) (lb. \$2.50) postpaid.

Grand Rapids Similar to Early Curled Simpson. The luxuriant growth makes it a desirable variety for the poultryman. It is also an excellent variety for the table and good all the year. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 50c) (lb. \$1.50) postpaid.

A & M MELONS



Watermelon row at the Terminal Market. This picture shows only the north end; it is duplicated at the south end. It is a busy place throughout the year. There is something seasonable at all times.

A & M Casabas

The best way to keep the Casaba late into the fall is to gather them together about the hill and cover them completely with the vines, but do not pick them off the vine.

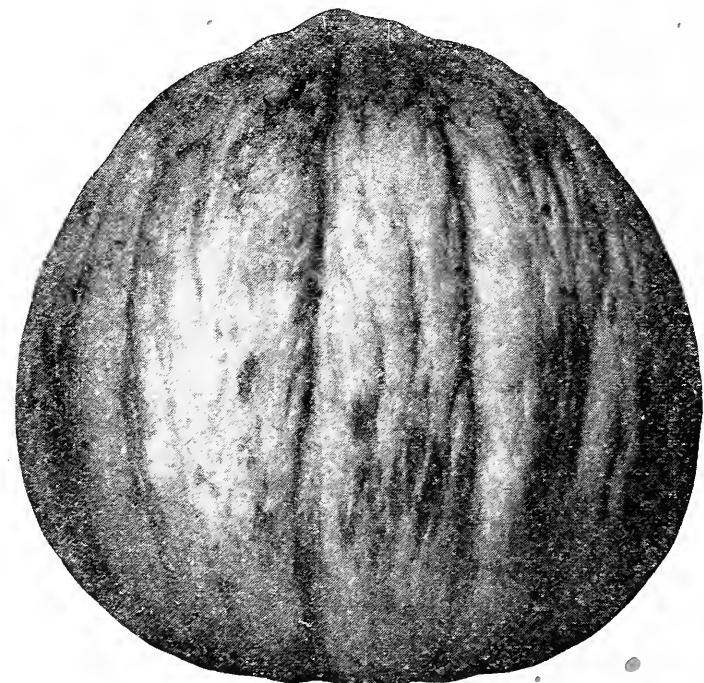
The Casaba is a great credit to Aggeler and Musser Seed Company. The Original Winter Pineapple Casaba imported from Persia fully forty years ago was the only Casaba grown in America until in 1899. We discovered a Hybrid. We at once recognized it as something different and far superior to the parent Casaba. It is due to our persistent advertising and to our vigilance in keeping the seed pure that we have today this wonderful Hybrid Casaba.

In the meanwhile the original Winter Pineapple developed a sport that showed a tendency to turn yellow. Under the direction of Mr. Sprinkle of Burbank this tendency toward yellow was encouraged until perfected and "Fixed." We then introduced the Golden Beauty and maintained its purity. It rapidly superseded its parent Casaba in popularity to the extent that one rarely sees a green one on the market. The Golden Beauty is now one of the melons of commerce just as is the Rocky-ford or the watermelon and the shipments over the country runs into thousands of carloads.

The Golden Hybrid is growing in popularity because of its color, but while a better seller it is just as good but no better in flavor than either the large or the improved Hybrid, but always bear in mind that every Casaba is a good one but none are good until you can make an impression with the thumb just as in a mellow apple.

Do not hesitate to buy Casabas but do not cut them until they are mellow.

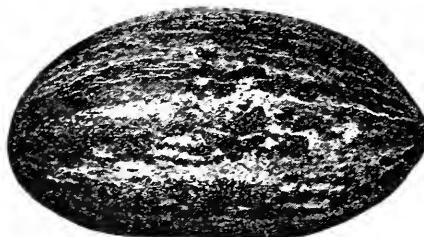
Imperial Valley has demonstrated that the earliest Casabas may be shipped with the late canteloupes and are more profitable.



Golden Hybrid

Santa Claus

The name is appropriate to the melon. It is a delightful present to send to your Eastern friends at Christmas. It is of delicious flavor, beautiful in its mottled gold and black coloring, and readily keeps until January. We advise that it be grown more extensively for the local trade. The supply has



Santa Claus

not been equal to the demand for several years. (Pkt. 10c) (oz. 25c) ($\frac{1}{4}$ lb. 80c) (lb. \$2.50) prepaid.

Golden Hybrid Just as the green Pineapple Casaba changed to the bright yellow Golden Beauty, so did the large green Hybrid Casaba change to the Golden Hybrid which we introduced in 1917.

At that time we stated that it would in a few years supersede the Green Hybrid.

The season of 1923 showed on the market that a much larger acreage had been planted to Golden Hybrid. It has superseded the large green Hybrid. This is easily accounted for. The dealers say that it is just as good as the Green Hybrid, and the golden color makes it a better seller. It is no longer necessary to give special recommendation to the Golden Hybrid—it is now established as one of the best sellers. (Pkt. 10c) (oz. 35c) ($\frac{1}{4}$ lb. \$1.00) (lb. \$3.00) postpaid.

A. & M. CASABAS—Continued

Winter Pineapple This is the first of Casabas introduced into America. We have carefully maintained the purity of type so that it is now just as distinct as when introduced more than forty years ago. This and the Golden Beauty are identical in all except color, which when mature is light green. The Winter Pineapple is more profitable as a late melon, therefore we recommend to growers near the Coast that it be planted during June. Our type of Winter Pineapple is round, selected for its good shipping qualities. (Pkt. 10c) (oz. 25c) ($\frac{1}{4}$ lb. 80c) (lb. \$2.50) postpaid.

A & M Hybrid

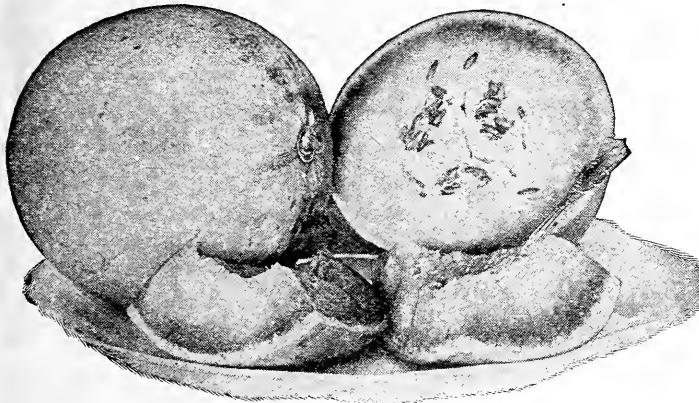
This is a cross between the Winter Pineapple and the Montreal Muskmelon. It grows to a very large size and is of delicious flavor. It is a rampant grower and yields enormously; as many as seventeen large melons were taken from one vine. It is profitable early and late. This melon is now grown as extensively for a midsummer crop as the muskmelon, and finds a ready sale. It originated locally, and is distinctly a Los Angeles product. The people are now fully awake to the delicious flavor of this Casaba. For the home garden or for the local market plant the Prince of All Casabas.

Plant from March 1st until July 15th. (Pkt. 10c) (oz. 25c) ($\frac{1}{4}$ lb. 85c) (lb. \$2.50) postpaid.

Golden Beauty Introduced by us in 1906, it at once became popular locally. It is now grown more extensively throughout California than any other Casaba because of its beautiful appearance, excellent shipping qualities and delicious flavor. It is the Casaba that added much to the fame of California, as well as adding a million dollars each year to the wealth of the state. (Pkt. 10c) (oz. 25c) ($\frac{1}{4}$ lb. 80c) (lb. \$2.50) postpaid.

A & M Honey Dew

The melon with an appropriate name



A & M Honey Dew This melon has won its way into favor wholly because of its excellent flavor and good keeping qualities. It is enormously prolific. It is ready to pull when the green luster has changed toward a creamy yellow. It is not ready to be eaten until like the Casaba, you can make an impression with the thumb as in a mellow apple.

The picture is typical of its shape; the average size is about as large as a cocoanut, but the smaller sized melons are not inferior in flavor. Every melon is a good one. Flesh is light green and sweet as honey. The rind is light green or silvery-gray in color, smooth as an egg and hard as the rind of a winter squash. It is therefore a good shipper. (Pkt. 10c) (oz. 25c) ($\frac{1}{4}$ lb. 85c) (lb. \$2.50) postpaid.

There is Need for Improved Methods

The growers in Imperial Valley and in other points, where melons are largely grown and shipped in carlots, have inspectors whose duty it is to see that the pickers pull only such melons that have advanced to the degree of sugar content that they will mature sufficiently to at least be palatable. This is for the protection of the growers themselves in order that the consumers will be satisfied and eat more melons.

There is great need for such inspection at the local market. There was much justifiable complaint that many of the Persian melons and Casabas offered were unfit to eat even after a reasonable time to mature because they were pulled entirely too green, so green they never could become palatable.

This practice is wrong in principle and wrong in policy, for the reason that any person meeting with disappointment at their first melon will indeed be very slow to purchase another.

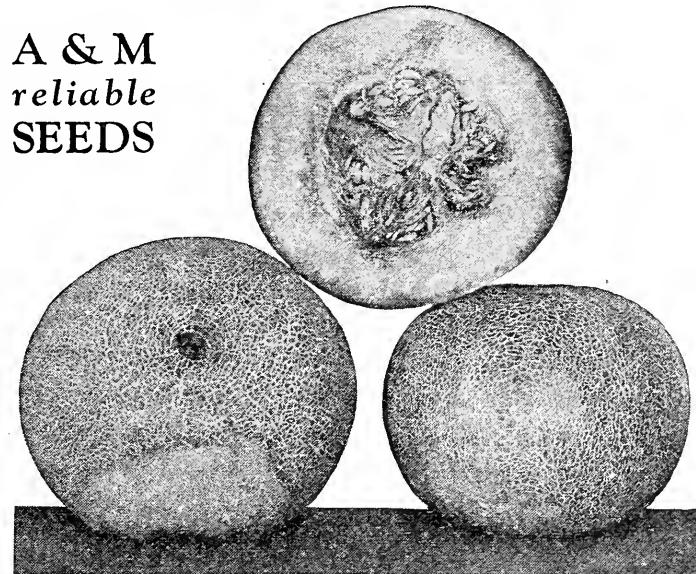
Then too it is just as wrong in practice to sell a melon of any kind that is unfit to eat as it is to sell a box of berries that have been topped out.

The health inspector would be within his duty to investigate the green melon vendor.

There is indeed much need for improved methods.

A & M Persian Melon

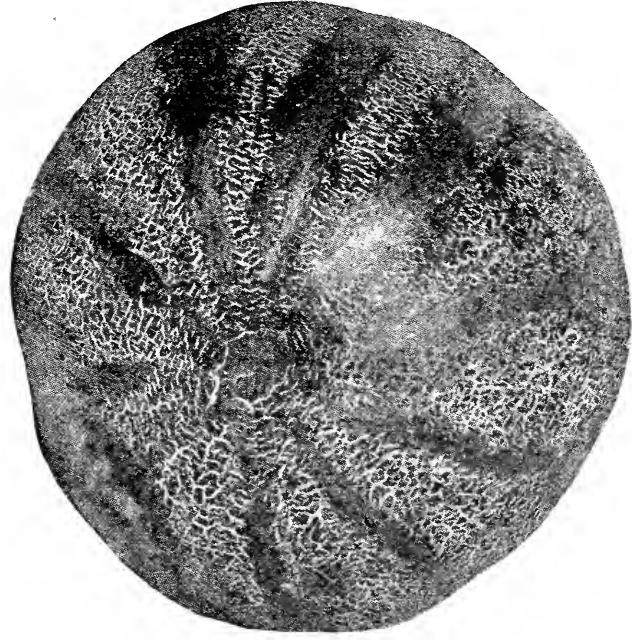
A & M
reliable
SEEDS



A & M Persian

Culture the same as for muskmelons. For several years we have labored to get this melon pure. Heretofore the greatest drawback to the grower was the large percentage of off-type and culs. But at last we are able to announce that our seed field was practically 100% pure; therefore, do not hesitate to plant this melon. It is in a class by itself. Large, extremely netted, without ridges, thick yellow flesh of delightful flavor. A good keeper and a good shipper. It should be picked while yet quite solid. Customers should be educated to purchase half a dozen at a time and set them away to be eaten as they become mellow like a Casaba. When properly picked they are ready for the table within six to ten days. (Pkt. 10c) (oz. 60c) ($\frac{1}{4}$ lb. \$2.00) (lb. \$6.00) postpaid.

THE TURKISH MELON



Turkish Melon

The Turkish Melon This is one of the excellent melons brought to California by the Armenians. Its flavor is equal to the Persian melon. It has yellow flesh and resembles the Persian melon in every way except that it shows on the rind a faint stripe and is without the heavy netting. Do not hesitate to order it for it is just as good as the Persian for the home garden or near by market. (Pkt. 10c) (oz. 30c) ($\frac{1}{4}$ lb. \$1.00) (lb. \$3.00) postpaid.

Yellow Fleshed Honey Dew When the Honey Dew Melon was introduced it quickly became popular. One would not believe another melon could be better, but the Honey Dew hybridized with the Tip Top produced a melon of the same outside appearance as the Honey Dew but with a deep yellow flesh that is positively more delicious. Do not hesitate to plant it if for the home garden or for shipping. (Pkt. 10c) (oz. 30c) ($\frac{1}{4}$ lb. \$1.00) (lb. \$3.00) postpaid.

A & M Muskmelons

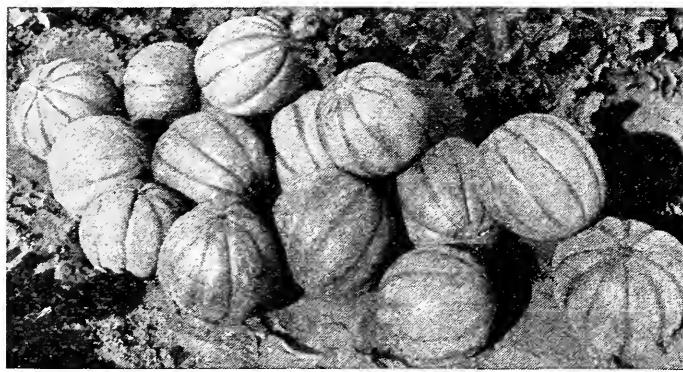
If you are growing musk melons for the shipper, ask for circular of cultural instructions.

See paper caps



This picture shows the inside workings of one of the large packing sheds in the Imperial Valley.

THE MOSBY TIP TOP



The Mosby Tip Top

Something New in Melon Culture

In 1915 an Armenian gave us a few melons which he called the Armenian Pomegranate which is similar to the melon known to the American seed trade as the Pomegranate or Peach Melon. We were advised that it was customary in Armenia to plant a few hills of this Peach Melon in the field with the Persian Melons and that accounts for its aromatic flavor.

We published this information in our 1916 catalogue. This attracted the attention of Mr. W. C. Mosby of Sawtelle. We gave him the seed of this Pomegranate Melon. He planted it with his Tip Top Melons and sure enough his melons had a more aromatic flavor than the Tip Top from other fields.

Dealers in Santa Monica discovered that his melons were better than others. Mr. Mosby called our attention to the results of his experiment. For two years we have inspected his fields in order to assure ourselves that his seed would show no deterioration. Last season we were convinced that Mr. Mosby had proven that the Armenian theory is applicable to the Tip Top and why not to other varieties.

During the season of 1922, Mrs. Wells of Belvedere Gardens planted a row of Peach Melons by the side of some Burrell Gems. The flavor of the Gems was so pronounced that without suspecting the cause she called our attention to the excellent flavor.

It is a well established fact that when cucumber or casaba vines are intercropped with muskmelons the pollen is absorbed by the melon and the flavor of that melon is much like the cucumber. It is entirely reasonable that the Peach Melon should impart its flavor also.

We have a very limited amount of seed of 1922 crop, the same from which Mr. Mosby's 1923 crop of excellent Tip Top Melons were grown. We offer it with a recommendation that you plant some of it that you may compare the flavor with other melons. (Pkt. 10c) (oz. 35c) ($\frac{1}{4}$ lb. \$1.00) (lb. \$3.00) postpaid.

NOTE—When our present supply of seed is sold out, we will have no more. We will not attempt to reproduce it.

We are offering this because it is something new in melon culture. It is up to you to further experiment with this idea.

August 28, 1923.

Mr. W. C. Mosby,
Santa Monica, Calif.

Dear Sir:—

We are sorry to learn that your melon patch has gone out of business for this year or season. We handled about 500 crates of your melons this season with great satisfaction to ourselves and to our customers.

Our customers soon learned where the good melons were and came back for more. They were as fine a lot of melons as any we ever handled.

Hoping you will have as good next year, we are,
Very truly yours,

JOHNSTON GROCERY CO.

To whom it may concern:

October, 1923.

This is to certify that during last year and the present year I have eaten musk melons produced by Mr. Mosby of Sawtelle, Cal. and for flavor, solidity and keeping qualities they were far superior to any other melon with which I have had experience.

H. H. STONER, M. D.

Pomegranate or Peach Melon

This seed was grown by Mr. Mosby with his Tip Top Melons, which fact should not make it less desirable for inter-planting.

Directions—Plant every 10th hill in every eighth row. This would mean one hill of Peach Melon to 80 hills of Tip Top. The wind and insects will distribute the pollen. (Pkt. 10c) (oz. 35c) ($\frac{1}{4}$ lb. \$1.00) (lb. \$3.00) crops.

Whites Favorite This muskmelon should become very popular. It will build up a roadside business as quickly as did Famous Indiana.

The flesh is white without fibre. It melts away like the flesh of the Hybrid Casaba and is as sweet. The rind is creamy yellow, scantily netted but with large ridges. No muskmelon is so prolific. It is ideal for the home garden or to grow for a roadside market. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 50c) (lb. \$1.75) Postpaid.

Rocky Ford This is an improved Netted Gem, oblong, slightly ribbed, heavily netted, having green flesh of excellent flavor. A very early small melon. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 50c) (lb. \$1.50) postpaid.

The Original Gautier Pineapple It is medium to large size, heavily netted, green fleshed with excellent flavor; solid and a good carrier.

We have the true type and recommend it to melon growers that they may again get the Old Original Pineapple Muskmelon. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 60c) (lb. \$1.75) postpaid.

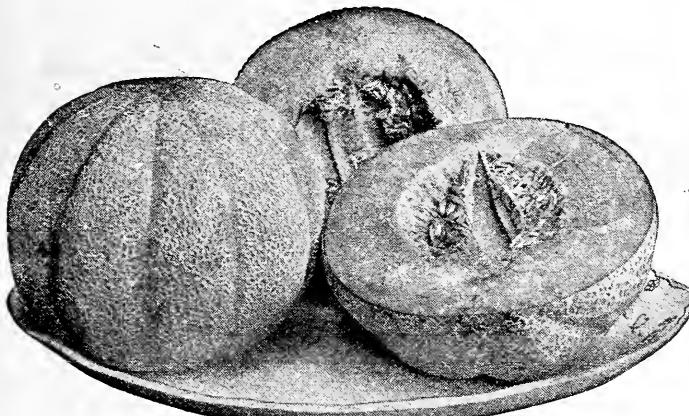
COMPLIMENTARY

"Your catalog was received a short time since. Thank you very much; it is a joy and an inspiration to do your best and have the best to do with. Please send a copy of your catalog to Mr. Howe. I feel sure he will find that you have many things he needs as he is always cultivating land to some extent. Again thanking you."

MRS. KATE NEVINS, Contra Costa County, Cal."

A & M Muskmelons—Continued

The United States uses annually 300 tons of muskmelon seed
YELLOW FLESH VARIETIES



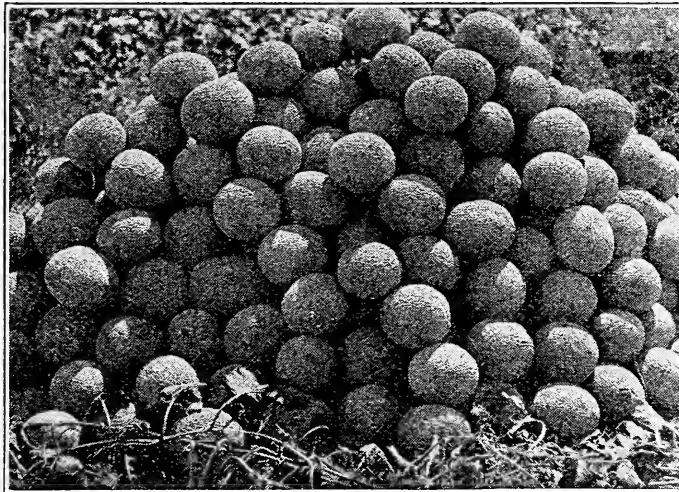
A & M Famous Indiana

The Famous Indiana This picture perfectly portrays the melon, which has a rich yellow flesh and a flavor that may be compared with the Persian.

In offering this melon we are quite in line with our established policy of bringing to your attention only the varieties that have been tried, proven and known to be of exceptional merit. We did the experimenting. You take no risk. Do not hesitate to plant the **Famous Indiana**.

A letter from our grower says: "All melons are fully up to your description. The Indiana is by far the best melon that I am growing for you; the seed is very pure, as all the melons are uniform in appearance. It is heavily netted, very thick meated and holds up in good condition for several days. (Pkt. 10c) (oz. 30c) ($\frac{1}{4}$ lb. \$1.00) (lb. \$3.00) postpaid.

Improved Burrell's Gem Has established itself as one of the biggest yielders. The shipper calls for it because it is solid and carries well in transit. The consumer wants it because of its excellent flavor. The growers all want our seed because we have the best strain. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 50c) (lb. \$1.50) postpaid.

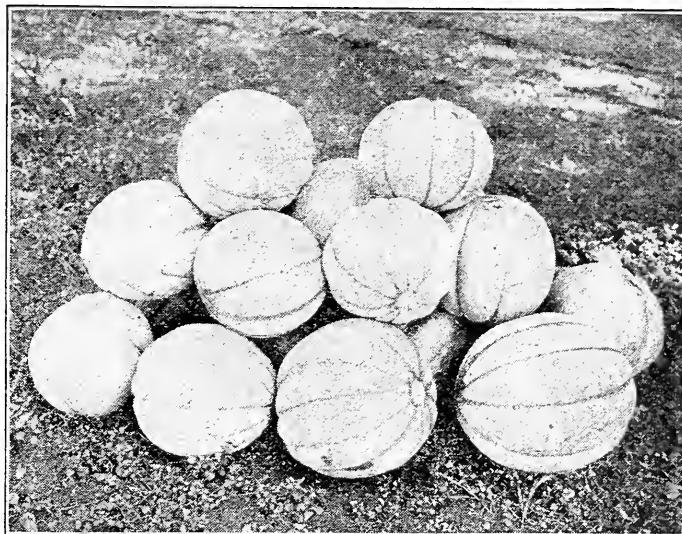


Pollock 10-25

Pollock 10-25 This is the latest improved strain of the popular Rocky Ford. It eliminates every defect of all other strains. Perfect in size, shape, netting, flavor, and long keeping and good shipping qualities. Our seed is pure. (Pkt. 10c) (oz. 25c) ($\frac{1}{4}$ lb. 75c) (lb. \$2.00) postpaid.

Our Gold Lined Netted Rock This is the Rocky Ford with the tinge of yellow around the seed cavity bred up to the highest state of perfection from the rust-resistant strain. The heavy netting forms a rind so hard that it will ship to the far Eastern markets with practically no deterioration. (Pkt. 10c) (oz. 25c) ($\frac{1}{4}$ lb. 75c) (lb. \$2.00) postpaid.

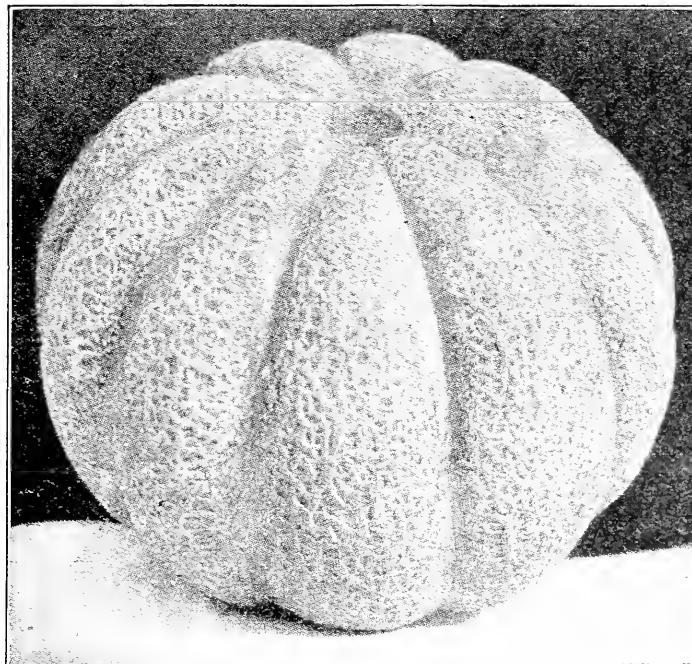
It is not generally known that your breakfast or lunch will taste better and be more healthful if you will eat your muskmelon or casaba with your toast and meat instead of eating it separately. Try it.



A & M Tip Top

A & M Tip Top This popular muskmelon is another triumph for Aggeler and Musser Seed Company because of our effort years ago to introduce it. The gardener was slow to accept it, but knowing its merits we persisted in offering it. It is now the most popular muskmelon grown for the local market. We have the right strain as you can see in the picture. The yellow flesh is edible to the rind. The melon is of medium size. Our seed is pure. (Pkt. 10c) (oz. 25c) ($\frac{1}{4}$ lb. 85c) (lb. \$2.50) postpaid.

Yellow Fleshed Columbus To all external appearances it is like the green fleshed variety, but its cross with the Tip Top adds flavor to its good keeping qualities, making it a good market melon. Its heavy netting, thick yellow flesh of excellent flavor makes it a very desirable all 'round melon. (Pkt. 10c) (oz. 30c) ($\frac{1}{4}$ lb. \$1.00) (lb. \$3.00) postpaid.



Irondequoit

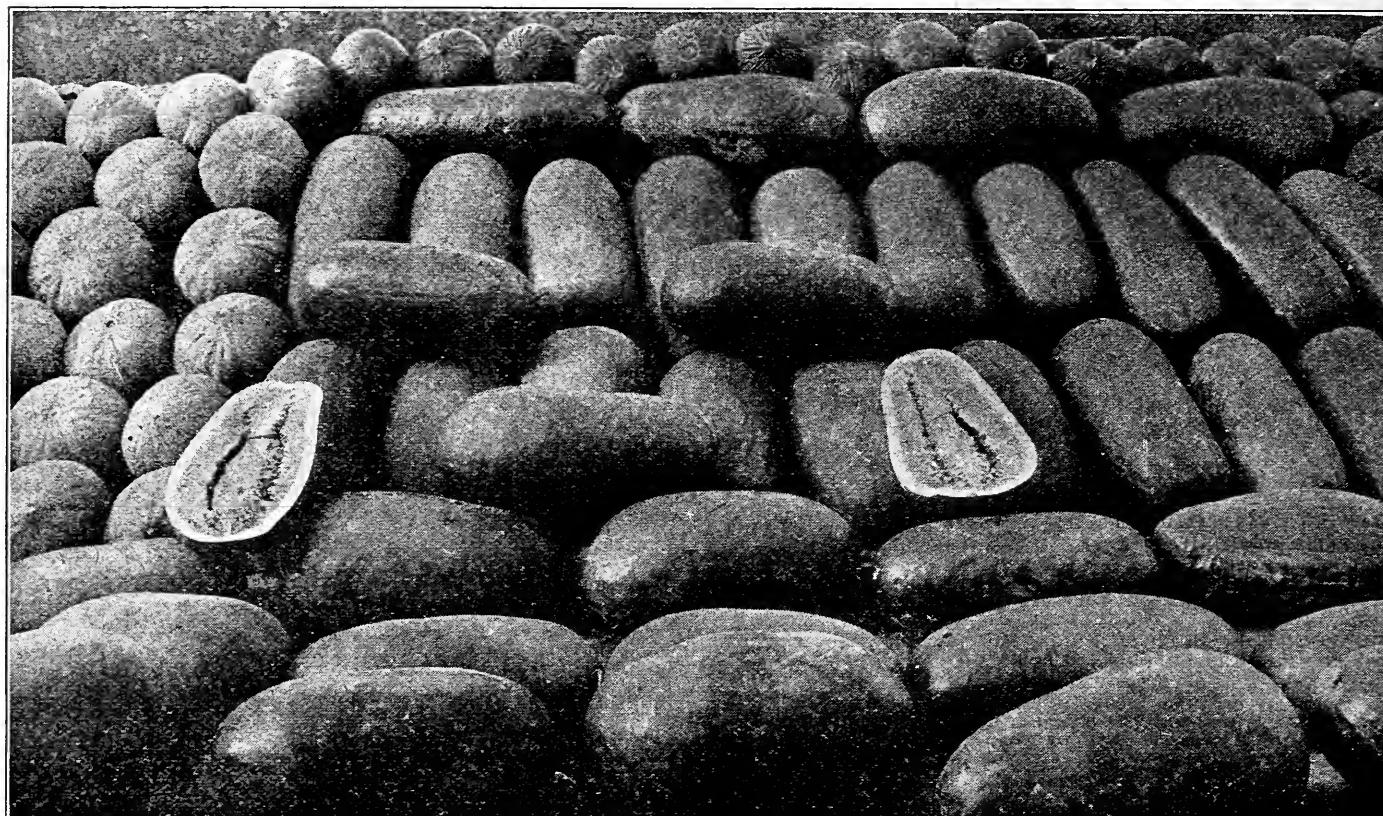
Irondequoit This excellent melon originated in Irondequoit, New York; hence its name. It is as popular in New York City as the Tip-top is in Los Angeles. We sent to Irondequoit and purchased some pedigree seed from the original introducer and now offer you the pure strain.

This melon may well be called the Improved Tip-top, for that is what it is. The appearance is similar except the netting which is heavier; it is more solid and less prone to split. The average size is slightly larger; the flesh is yellow and the flavor unsurpassed. It is an ideal melon for the peddler or the cafeteria. It is neither too large nor too small. (Pkt. 10c) (oz. 25c) ($\frac{1}{4}$ lb. 85c) (lb. \$2.50) postpaid.

A & M Watermelons

Write United States Department of Agriculture, Bureau of Plant Industry, Washington, D. C. and ask for "Farmer's Bulletin No. 821." Watermelon Culture.

See Leguminous Crops
for Green Manure.



Turkish

Golden Beauty

This picture was taken at the field of our grower

Excel Melons

Many large melon growers are now using the Segment Corn Planter, particularly for replanting—it does the work better. Price \$2.00 f. o. b. here. Wt. 5 lbs.

The Segment Planter was made to plant corn. In order to plant muskmelon seeds it is necessary to make the hopper tighter. A few nails will do the work.

For Melon Wilt—Pour a cup full of Bordeaux Mixture about the main stem so that the earth will be saturated and the liquid thoroughly applied to the stem. Here is the seat of the trouble, whether fungus or an insect, and the Bordeaux will prevent the cause. Butler Bros. of Lamanda Park complained to us that their vines were dying of wilt. We recommended this remedy which they at once applied only to the vines attacked, with the result that the vines revived, and in one night appeared to have made a new growth of six inches. They then applied it to the entire field and saved it for the season. But Mr. Butler says toward the close of the season it appeared again, and he believes the Bordeaux should be applied at least twice during the season.



Culture—Plant the seed in a furrow, dropping ten seeds every eight or ten feet apart; cover about one inch. As the vines grow, hill the earth about them until the roots are from ten to twelve inches deep. When the vines are safely established, thin out, leaving only two vines to the hill. It is a good plan to establish your rows by throwing the soil toward the center, with two rounds of plowing, and cultivate every week during the early growth of the plants. This gives deep cultivation at the time it is needed, mulches the soil properly, makes proper rows slightly raised in the center, allowing a low place between for irrigating. Be sure to cultivate after each irrigation, as soon as the nature of the soil will permit. If these instructions are carefully followed you will have thrifty vines throughout the season.

FOR ALL KINDS OF MELONS

FOR APHIS—First keep the vines hardy by deep planting and proper cultivation, irrigation and fertilizing. Then if the aphis appears, which is unlikely, spray with Nico-Dust, or bury the affected part with dust. Either way is a constant fight. Lady bugs in some instances are destroying the aphis very satisfactorily.

FOR MELON BLIGHT that is caused by a fungus at the root, spray the hill freely with Bordeaux so that the liquid will follow the stem several inches beneath the surface. This should be done as a precaution rather than as a remedy.

READ THIS. If you would prolong the life of your vines, make a path between the rows by training the vines to grow along the rows and not across from one row to the other. Then at picking time do not allow the pickers to tread upon the vines. To do so makes many culls and shortens the life of the vines and lessens your profit about one-third.

For a good yield of melons grow a crop of *Melilotus indica* during the winter. Plow under during February; broadcast two sacks of each of Toro Sulphur and lime. This is a precaution against blight and will fertilize your field as nothing else will do.

Our Selected Melon Seed

Owing to our extensive trade with large melon growers and associations, we exercise every precaution possible to secure the best type of melons. Having the best seed obtainable we grow our melons under our own supervision. Our seed fields proved the wisdom of this method, for they showed the highest percent of perfect melons.

The fields are widely separated, so that there is no cross-pollination. The melons are to all appearances practically true to type. Our Superintendent understands his business and is conscientious, knowing the importance of his responsibility. I am sure this year's seed will maintain our record of high-standing among melon growers.

Mr. Melon Grower—You need not hesitate to give us your order for melon seed. Our Mr. Musser visited our melon fields during the growing period and reported that the Chilian is about 100% pure, the Black Seeded Angeleno which is a cross between the Chilian and the Angeleno, shows slightly the Chilian stripe through the dark green which indicates its origin. Next to the Klondike the Angeleno is the most popular melon in California. Our field of Klondike is the true type of melon just like the picture in this catalog.

The fields of Persian Melons, Casabas and Tip Top Muskmelons are as pure and perfect as it is possible to be, just about 100% pure.

A & M Watermelons—Continued

THE KLONDIKE

The Prince of all Watermelons
The melon that took first prize at the State Fair Sacramento
Also at the Los Angeles County Fair at Pomona



A & M Klondike

We first offered the Klondike watermelon in 1909. It gained in popularity each year, first in one market then another. On account of the thin rind and extreme crispness the shipper was slow to accept it. But its extreme popularity impelled the shipper to grow it. Each year a larger acreage was planted, bringing greater profit to the grower. Although having a very thin rind it is a better shipper because it does not wilt.

We now feel that the Klondike has fairly won the title, "The Prince of all Watermelons."

It was discovered as a sport by Dr. George P. Clements, Secretary of the Agricultural Department of the Los Angeles Chamber of Commerce. It was introduced by us and we kept it pure to the original type.

The seed is small. One pound of Klondike will number as many seeds as two pounds of other varieties. The color of the seed is brown, mottled black. (Pkt. 10c) (oz. 35c) ($\frac{1}{4}$ lb. \$1.00) (lb. \$3.00) postpaid.

More About the Klondike

The fame of the Klondike has spread to other cities in California, and tourists have sent seed to other states from whence we receive the same expression of appreciation that we get in Los Angeles. Wherever it is grown it is the best melon, always selling at a higher price than other melons. If you would grow for your own table or for market you will make no mistake to plant Klondike.

Tom Watson has for several seasons been the most popular melon in the South. Its shape is similar to the Kleckley Sweet, but the color is a lighter green. Its great merit is in its earliness, good flavor, thin rind, and good keeping qualities, making it one of the best of shippers. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 50c) (lb. \$1.50) postpaid.

Kleckley Sweet This is an excellent melon either for the home garden or for shipping. It is of medium size, a very green rind, with deep red flesh of delicious flavor. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 40c) (lb. \$1.25) postpaid.

White Seeded Angeleno The most attractive in appearance of all watermelons—its large size, beautiful dark green rind with a tinge of gold showing through the green. No other variety compares with the Angeleno in its bright red flesh, red to the rind, and entirely free from fibre, simply melts. If the picker will observe the gold showing through the green as soon as it is ripe, he need never pick an unripe melon.

(Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 50c) (lb. \$1.50) postpaid.

Important Notice.—Owing to the tendency of the seed of this melon to split open, we advise you to soak the seed in water for only a few hours. It soon closes and is ready to plant, and every seed will germinate, but if planted before soaking, the seed fills with dirt and decays. Please heed this notice.

"I planted your seed last year and was satisfied with everything I got from you. Although I had the sorriest piece of ground in the valley, no one had any Klondike melons to compare with mine. The Honey Dews also were out of the class of anything here."

MR. ERVIN FORESTER, Arizona.

READ THIS

We are continually getting letters of inquiry for just such information as is given in this book. We are pleased to get the letters, but if the writers would first look to the subject of their inquiry, they would in many instances save themselves trouble and time.

ANGELENO

THE MELON FOR THE SHIPPER



A & M Black-seeded Angeleno

Black Seeded Angeleno This is another triumph for Aggeler and Musser Seed Company. The original Angeleno had white seed. The cafeteria managers said their trade required a black seeded melon because they knew that when the seed was black the melon was ripe.

We hybridized the Angeleno with Black Seeded Chilian and got the desired results the first season. It required but two years more to perfect the type. The flavor was also improved. It at once became a favorite with shippers.

As a shipper it is extraordinary because it rarely breaks, even supporting the weight of a man weighing 170 pounds. A carload will average in weight from 25 to 30 pounds to the melon.

It is like the original Angeleno in shape and appearance except the stripe of the Chilian is sometimes apparent. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid.

Chilian For twenty-five years the leading melon and is as popular today as at any time, and is likely to continue its popularity for many years to come. Its thin rind and delicious flavor command it to the consumer, but its good shipping and selling qualities make it a favorite with the grower and dealer. It is very prolific and just a desirable size for the peddler to handle, and every melon is a good one.

White Seeded Chilian Preferred because of its large average size. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 50c) (lb. \$1.50) postpaid.

Black Seeded Chilian Preferred because of its earliness, short crop and black seed, which gives it preference at restaurants, hotels and cafeterias. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 50c) (lb. \$1.50) postpaid.

All Chilians are good regardless of the color of the seed, but the Black Seeded one is planted for early crop.

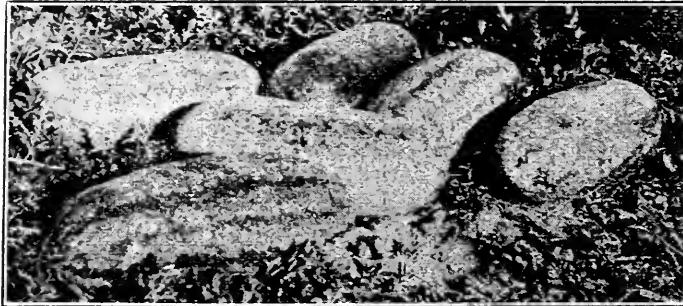


Excel

Excel To the grower and shipper who wants a large melon the Excel fills the bill. It is oblong, dark green with a suspicion of a stripe, and will average 35 lbs. and is of excellent flavor. It is a good shipper and has maintained its popularity for many years. Our seed is from our own growing and is true to type. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 50c) (lb. \$1.50) postpaid.

A & M WATERMELONS—Continued

Irish Gray The introducer describes it as follows: "The color of the rind is yellowish grey, resembling a variety of Citron. It will keep in good condition for a long time after being taken from the vine, and stand long distance shipping better than any other melon. The flesh is bright, sparkling red, very sweet and firm. As a home market melon it is unsurpassed. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid."



A Picture from our Field of Florida Favorite

Florida Favorite This melon is very popular with shippers, because of its extreme earliness, and all round good qualities as a good shipper. In appearance it is similar to the Rattlesnake, the rind being considerably darker. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 40c) (lb. \$1.25) postpaid.

Peerless Also called Red-fleshed Ice Cream. This is the melon that proved so popular in Oregon and Idaho. It is early, a good shipper and a delicious melon. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 50c) (lb. \$1.50) postpaid.

Rattlesnake Has long been a popular melon with shippers. It is a long melon, having a white rind, with dark green stripes. Flesh of excellent flavor. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 40c) (lb. \$1.25) postpaid.

Yellow-Fleshed Ice Cream

This melon grows a very large size, is long in shape and the rind an even dark green. In quality it is simply delicious, sugary and of a rich flavor peculiar to itself. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 50c) (lb. \$1.50) postpaid.



A & M Winter Melon

Winter Melon This new melon is slowly but surely forcing itself into favor because of the many good qualities which are not apparent at first acquaintance. The Winter Melon might easily be mistaken for a small white citron and the dealer must be convinced, they in turn must convert customers to the knowledge that the Winter Melon is a thing of great luxury. It is late to mature; very light in color with a suspicion of a stripe; size 10 inches in diameter; seed small shiny black, flesh pink, solid and stringless. The flavor when cold is sweet, crisp and surprisingly delicious, and when you have finished you realize that you have eaten a melon as entirely distinct from a water melon, as the Casaba is apart from the Cantaloupe and just as delicious. Like the Casaba it should not be eaten right off the vine, but be allowed to lie around until the first signs of decay. It decays slowly like an apple, not like other watermelons. (Pkt. 10c) (oz. 35c) ($\frac{1}{4}$ lb. \$1.00) (lb. \$3.00) postpaid.

"The Winter Melon is a winner. They keep well and taste good. It is also known as King and Queen, also Cocoanut Melon."

CHRIS PASEIL, San Diego County.

"Your Winter Melon that we tried out last season proved a wonderfully fine melon in our climate; earlier by several weeks."

(Signed) "CORA A. WELLS.
"Please send me another copy of your 1924 seed catalog. I am ordering seeds for my neighbors and myself and we are well satisfied with your seeds. They are the best we ever had."

KENNETH LEE, Maui, T. H.

"I wish to thank you for your kindness, sending seeds so promptly. We are gardening and I plant most of the seeds and feel I can't plant any but A & M seeds."

M. F. RUSSELL, California.

CITRON



Large Green Striped Citron. Wt. 60 lbs.

Citron Large Green Striped

Weighs from thirty to sixty pounds. Is better than pumpkin for stock. Allowed to lay in field or piled in the barnyard will not be damaged by frost nor decay until the following summer. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 35c) (lb. \$1.00) postpaid.

Preserving Citron Red Seeded, small round melon. This melon with a proper portion of lemon makes an excellent preserve that is as good as marmalade. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 40c) (lb. \$1.25) postpaid.

If you have any soil too sandy to grow the usual crops, plant the large green striped citron, you will be sure of a big crop.

Formula for Cutworm and Grasshopper Poison for Five Acres

Paris green (or white arsenic)	1 lb.
Molasses (cheap blackstrap preferably)	2 qts.
Lemons (or oranges)	$\frac{1}{2}$ doz.
Water	4 gals.
Bran (or alfalfa meal)	25 lbs.

Grind lemons with meat grinder, mix all ingredients thoroughly. Spread thinly to avoid danger to livestock.

Best spread in late afternoon.

"I tried all spring and summer to grow cabbage plants, but the cutworms would destroy nearly all of them. In desperation I mixed up the formula given in your catalog. That got them; I have no more trouble. Thanks for the advice."

HARRY WATTAN.



A field of Musk melons showing two rows on a ridge 6 ft. wide. Two furrows between ridges being irrigated. As soon as the soil will permit, then furrows will be obliterated with a cultivator, leaving one furrow for the next irrigating. The vines will soon cover the space between.

"I like your firm very much. The treatment I am accorded at all times is courtesy itself, but best of all because of the success I have had always with your seeds."

THEO. W. RELMAN, Los Angeles

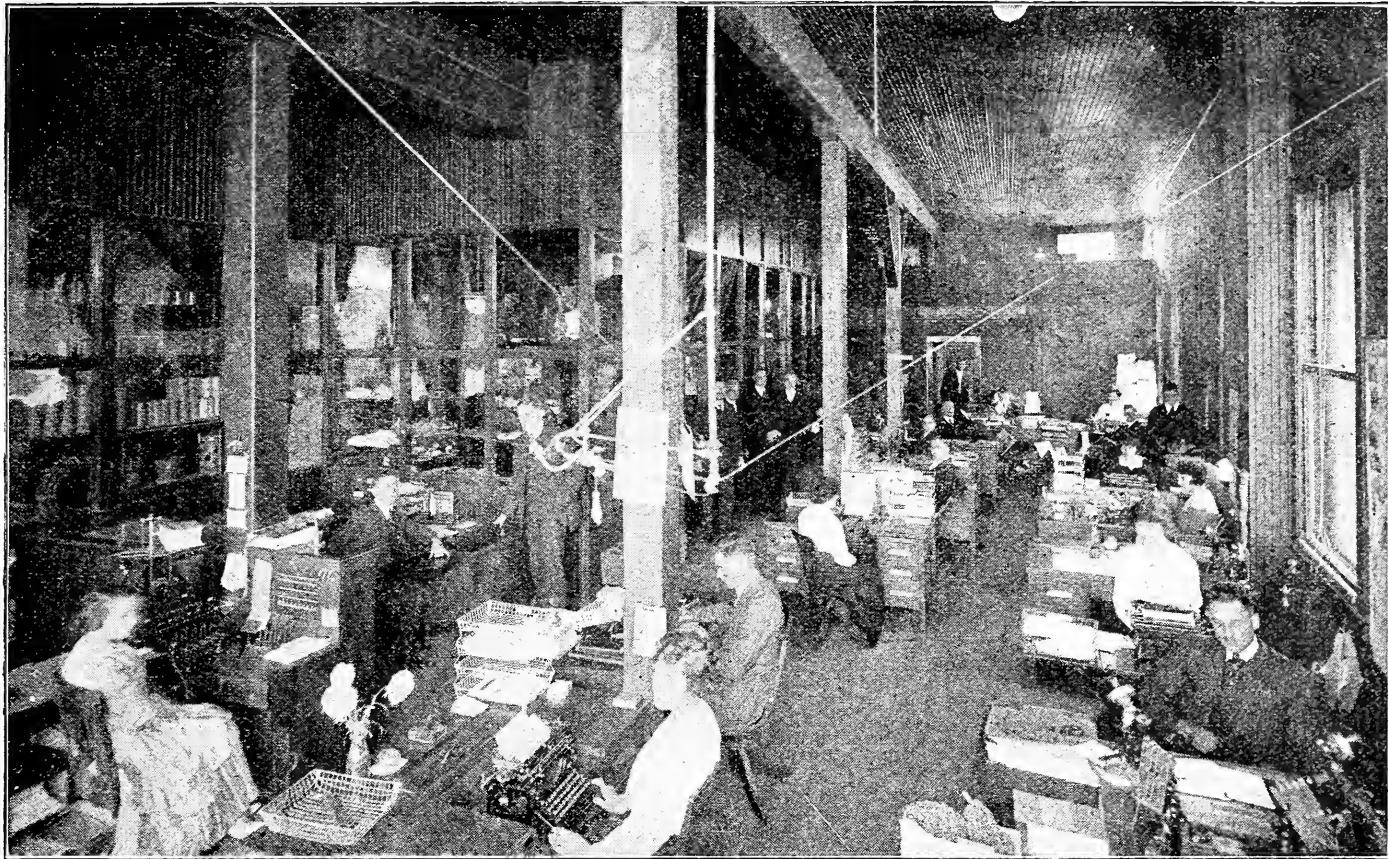
"You put out the best seed catalog ever, we get so much valuable information out of it."

B. F. SIEBENTHAL, California.
"Ship the best. I have had seeds from you a while back and I can say that they were the best. I am of the opinion that your policy of the best seed hasn't changed yet."

H. KURIHARA, California.

"I find your catalog a wonderful help in my gardening. Please send it to my son Hamilton S. Roach."

MRS. H. A. ROACH, Texas.



Our Main Office at 1934 East 15th Street

In the foregoing pages we have, with illustrations, told you of the development of our business and of the enormous expense connected with the precautions necessary to protect our customers against unclean, impure seed, and seed of low germination, and seeds that do not grow true to type.

We have given much space to cultural instructions and general information which is reliable and if heeded by the grower there is little likelihood of a crop failure.

You can readily understand that the large volume of business in a reliable seed house requires a much greater amount of clerical work and overhead expense than any other line of business.

From this office orders are issued that require the mailing of thousands of letters every month. Which requires an enormous clerical force and a great expense for stationary and postage. These clerks accomplish the enormous amount of work required, with the aid of the Mechanical Bookkeeping Machines and all time and labor saving machinery.

The fleet of salesmen emanating from this office necessitates an enormous expense in automobile equipment and upkeep, all in the service of our customers.

We are constrained to feel there is an undue lack of appreciation of this service when a grower will buy cheaper seeds from less reliable sources, and when he has an inferior crop he will rave about the unreliability of all seedsmen.

Surely with all the precautionary service we give there must be less risk of crop failure.

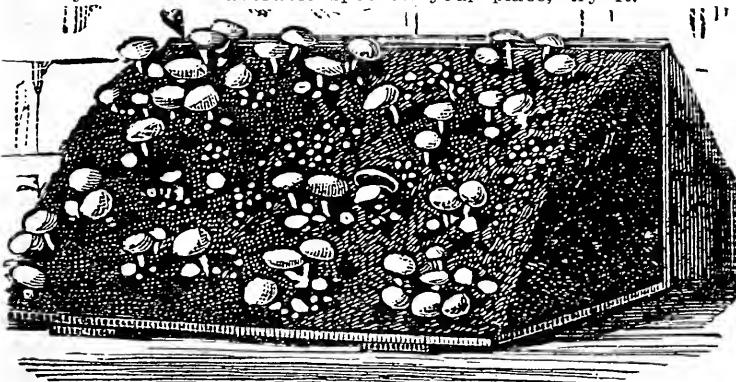
A & M Mushrooms

One of the most profitable crops for the outlay that can be grown. The market is sure, because the supply never equals the demand. Mushrooms can be grown in any dark room or cellar where the temperature can be kept at 50 to 75 degrees. The main conditions in mushroom growing are proper and uniform temperature, and very rich soil. One pound of spawn is sufficient for a bed 2x8 feet. We have the very best spawn obtainable. If interested, write for circular.

Pure Culture Spawn—Brandywine—Put up in bricks. (Per brick 40c) (5 bricks \$1.75) prepaid.

Many inquiries come to us from would-be growers of mushrooms. Our reply is not always encouraging because many growers have marvelous success for a time, but we know of not one permanently prosperous grower. There seems to be an element of uncertainty.

If you have a favorable spot on your place, try it.

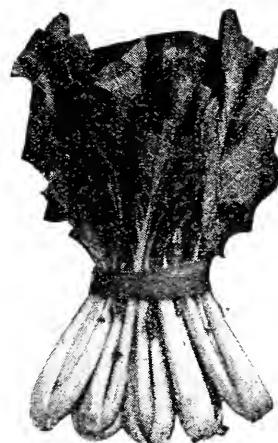


Mushroom as it grows

A & M Mustard

Yellow Seeded

The seed is used extensively for spicing, pickling and other culinary and medicinal purposes. The young plants make delicious greens. (Pkt. 10c) (oz. 20c) (lb. 50c) postpaid.



Chinese White Mustard

Southern Giant

The true curled-leaf variety so popular in the South for planting in the fall. (Pkt. 10c) (oz. 20c) (1/4 lb. 40c) (lb. \$1.25) postpaid.

Ostrich Plume

Is delicious as well as ornamental; the leaves resemble ostrich plumes, hence the name. (Pkt. 10c) (oz. 20c) (1/4 lb. 50c) (lb. 1.50) postpaid.

Chinese White This is a delicious vegetable and "avors strongly of Brussels Sprouts, being less pungent than the American varieties. It is greatly relished by the Orientals, and can be seen all the year 'round at vegetable stands kept by the Japanese and Chinese. (Pkt. 10c) (oz. 40c) (1/4 lb. \$1.35) (lb. \$4.00) postpaid.

Chinese Green This is an Oriental vegetable, and like the White Mustard, is grown all the year 'round, but like our American Spinach, thrives best in the winter season. (Pkt. 10c) (oz. 40c) (1/4 lb. \$1.35) (lb. \$4.00) postpaid.

A & M Onions

Write U. S. Dept. of Agriculture, Washington, D. C., ask for Farmers Bulletin No. 1007, "Control of the Onion Thrips."



**A & M Riverside Sweet Spanish. Six Onions, one yard.
Weight 26½ lbs.**

Culture.—No crop is so liable to variations by cultivation and soil as the onion. Having rich soil with too much irrigation will produce thick-necked scallions, while the same soil, well drained, would produce the finest onions. A sandy loam well fertilized is best.

No vegetable is so sensitive to variations of climate as the onion. It is of utmost importance that the right variety is selected for each month in the year, and for your particular climatic conditions.

Irrigate in the furrow between the ridges to avoid flooding the onion, which causes the onion to rot readily, rendering it unfit to ship or to keep.

To succeed in growing onions it is highly important to make a proper selection of seed suitable to the time of planting. West of the Coast Range plant the Queen variety in August and September. They will then attain marketable size in March and April. East of the Coast Range, where the temperature is more uniform, as in Coachella and Imperial Valleys, plant the Crystal Wax or Bermuda onion in September. We advise planting all other varieties from October until March, selected according to the market in which they are to be sold, and the facilities for irrigating.

The White Australian should prove popular because of the good keeping qualities.

Three pounds of seed are required to plant one acre for dry mature onions. One ounce will plant one hundred feet of row. For bunching onions, plant one-fourth pound of seed to 100 feet of row or 10 lbs. per acre.

We claim our onion seed to be the highest type as to germination and purity. When you wish to plant onions consult us as to when, how and what variety to plant. For early local trade plant New Queen.

See Fertilizers

Large Onions are now the style. This has been brought about by the introduction of

The A & M Riverside Sweet Spanish

(The most popular onion on the local market)

We have no sets of this variety

Very large, light yellow, globe shaped, small top, good shipper.

This Onion was brought from Spain several years ago. A small acreage was grown, the product of which was sold at the stores of Riverside, California. The unusual mildness and excellent flavor made this onion popular at once. A larger acreage was grown and the popularity broadened until the onion is in demand in Portland, Oregon, Chicago and as far east as Detroit, Michigan.

It is a good keeper and not prone to smut; we do not say it is immune, but the grower gives the following directions for curing and keeping this onion, and if followed there is little likelihood of smut.

Plant in December or January. It will mature in September when there is no danger from sun scald. Allow the onion to thoroughly mature until the tops have fallen and dried.

Then pull the onions and allow them to remain in the field in rows well covered with the tops, which after a week of favorable weather become as dry as chaff. The tops are then rubbed off and the onion put in crates and stacked loosely in a shaded but well ventilated place. After four to six weeks the onion is so thoroughly cured it may be safely shipped to any city within the United States.

It will be very profitable to the grower who will plant this onion.

To obtain the highest price, this variety should be planted about February 1st; they will then mature about August 1st, and if the prevailing price is too low put them in cold storage. (Pkt. 10c) (oz. \$1.20) (¼ lb. \$4.00) (lb. \$12.00) postpaid.

Yellow Globe Danvers

This onion is the standard winter sort in many markets. The shape is almost globe form and the bulbs are quite large with thin necks. The skin is a straw yellow, while the flesh is pure white, solid and of good quality. Its earliness makes it valuable for market. The crop is very uniform and ripens at one time. (Pkt. 10c) (oz. 25c) (¼ lb. 80c) (lb. \$2.50) postpaid.

Red Wethersfield

Probably the most popular red onion, and the one grown more largely throughout the United States than any other. It is a large medium flat onion of excellent mild flavor. (Pkt. 10c) (oz. 25c) (¼ lb. 85c) (lb. \$2.50) postpaid.

Australian Brown

Quick to mature; a good keeper; solid and heavy; an excellent onion for shipping. The skin is a light brown. Its solidity gives it great weight and a sack weighs several pounds heavier than a sack of other varieties. The onions are thin-necked and ripen very early in all soils. As the plant makes a very quick growth it matures the bulbs before the hot, dry summer weather sets in, and this in connection with the exceptional keeping qualities makes it a most profitable variety. (Pkt. 10c) (oz. 20c) (¼ lb. 60c) (lb. \$1.75) postpaid.

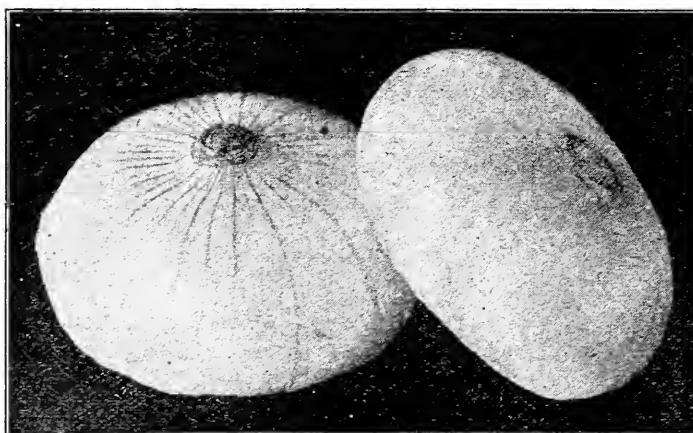
Read

Onion smut is quite a menace in some sections cutting the yield nearly in half.

Here is a good remedy: One pint of commercial Formaldehyde to 16 gallons of water; attach to your seeder a tank with a 5/16-inch hole. This will drop the required amount of mixture in the furrow with the seed. One gallon should be sufficient to apply to 180 feet of row.

"Last year, 1923, I had some of the finest onions I ever saw. The average of a whole row was eight ounces each, about seventy pounds from one packet of your seed."

MR. JOHN BRUEHLER, South Dakota.



Extra Early White Queen This is by far the earliest and best onion to grow in Southern California. Planted during August and September it attains marketable size in March and April and is sold on the local market as early as the Bermuda. Local growers market them while quite young, cutting the top off close to the onion. They harvest only what can be sold from day to day.

This practice is very profitable for the reason you are selling a green onion at the price of the early dry onion. (Pkt. 10c) (oz. 50c) (¼ lb. \$1.65) (lb. \$5.00) postpaid.

"I will say that I'm sure proud of your seed. It is a pleasure to look at and to plant."

CHAS. C. OSWALD, Texas.

"Your catalog is wonderful in its simple instructions to the new beginner and helps for the experienced. I thank you for mine."

A. E. McBRIDE, California.

A & M ONIONS—(Continued)

Crystal Wax and Yellow Bermuda



Crystal Wax Onion

Texas and in Coachella and Imperial Valleys to the exclusion of every other variety. Why? Because they are adapted to that climate; because when planted the latter part of September they mature in March and April, just when the market is bare and the price is highest. Onion growers are satisfied with 300 crates per acre, and 25% off color. Our seed produces 500 to 800 crates per acre, with less than 1% off color.

Crystal Wax (Pkt. 10c) (oz. 50c) (1/4 lb. \$1.65) lb. \$5.00
postpaid.

Yellow Bermuda (Pkt. 10c) (oz. 30c) (1/4 lb. \$1.00)
(lb. \$3.00) postpaid.

INTERCROPPING What it Means

Intercropping ought to be more generally practiced. Probably it would if it were better understood.

Intercropping means planting two or more crops in the same space usually required for one crop.

The Picture illustrates very clearly what is meant by intercropping.

The advanced crop shown in the picture is radishes about ready for the market. These radishes were planted in the furrow between two ridges of beets probably on the same day or very soon following.

The radishes will be marketed and the soil cultivated before the beets have suffered from over-crowding.

Early radishes and Spinach may be intercropped with the following varieties: beets, turnips, carrots, kohlrabi, onions, and celeriac. (Cabbage, tomato and cauliflower plants intended for transplanting may be intercropped as radishes.) The seed of the foregoing, when intercropped should be planted about the same day.

Another way of intercropping is to allow one crop to advance to a certain stage before planting the intercrop. Sweet corn may be advanced to a height of two feet, then plant pole beans. If the corn is higher it will shade the beans too much. The corn will be harvested and the stalks serve as poles for the beans. Potatoes may be advanced to the last cultivation then plant corn. The corn will be well advanced when the potatoes are harvested. This is no new idea but we pass it along. With a little forethought and planning it may be worked to good advantage, especially in the small home garden.



The advanced crop is radishes planted in the furrow between ridges of beets

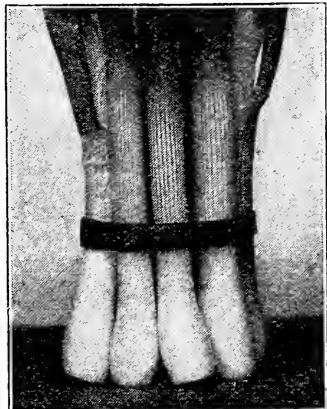
Red Bermuda In shape, like the White Bermuda, color a pale red.

Planted during January matures latter part of June. No other onion is ready for use so quickly after planting seed. It is the right onion for the home garden. (Pkt. 10c) (oz. 30c) (1/4 lb. \$1.00) (lb. \$3.00) postpaid.

White Portugal, or Silverskin A good second early white flat onion to follow the Extra Early White Queen. It should be planted any time from November 1st until April 1st. It is a good keeper and desired for shipping. It has long been a favorite, and probably no other variety is more generally popular with growers throughout the United States. Under good cultivation the average diameter is from four to six inches. The thick skin is a clear silvery white, flesh snow-white, sweet and tender. (Pkt. 10c) (oz. 40c) (1/4 lb. \$1.35) (lb. \$4.00) postpaid.

Southport White Globe This onion now easily leads all other varieties in popularity on the Los Angeles market and is selling more readily and at higher prices. It is a good keeper, either in the field or in cold storage. It is a silvery white in color, globe shaped, and of delicious flavor. It is the popular onion with the shipper. (Pkt. 10c) (oz. 40c) (1/4 lb. \$1.35) (lb. \$4.00) postpaid.

Prizetaker A large Yellow Globe Onion of finest flavor, handsome shape and enormous size, many single onions having been raised to weigh three pounds or over. The Prizetaker grows always to a perfect globe shape with a bright straw color. (Pkt. 10c) (oz. 25c) (1/4 lb. 85c) (lb. \$2.50) postpaid.



Bunching Onions

Bunching Onion

Many think any white onion will do for a bunching onion, but this is not true. Our growers for fancy trade have learned that we have the best strain of seed for this purpose, and our sales amount to thousands of lbs. each year. The picture shows a sample of what our seeds produce. They are just the right shape. (Pkt. 10c) (oz. 35c) (1/4 lb. \$1.20) (lb. \$3.50) postpaid.

A & M Onion Sets

The earliest onions are grown from sets planted in September. This brings them in the market in February and March, when prices are highest. About 250 lbs. of sets will plant one acre.

We have sets only in two varieties. The White Portugal and the Yellow Globe Danver. Therefore state whether you wish white sets or yellow.

We have no sets of the Riverside Sweet Spanish.

For the home garden no vegetable is so valuable as the onion, and for this purpose it is better to plant sets, because they are ready for the table six weeks after planting. Set them three inches apart in rows six inches apart. When ready for use, take up every other one as needed, allowing the balance to grow to mature size. One pound of sets will plant about fifty feet of row. (Lb. 40c) postpaid) (10 lbs. \$3.50 postpaid). For larger quantities write for prices.

A & M GARLIC

Cultural Instructions from a Professional Grower—“I am of the opinion that it would take 250 lbs. to plant an acre of Garlic. I make my rows two feet apart; make double rows, the garlic about four inches apart in the rows each way. I believe in good soil; I can raise between four or five tons per acre. Weeds must never grow in garlic, and it needs plenty of water regularly. If you leave it suffer either for water or cultivation it matures before good size. Garlic planted October 2nd, matured May 7th. The Large White Garlic planted the same time matured in June.

Market—The demand for garlic is limited but insistent and the price has a wide range, from 5c per lb. to 50c per lb. (Per lb. 40c) (10 lbs. \$3.50) postpaid.

Eat More Vegetables

Vegetables are the natural source of vitamins. Vegetables contain more of this life force than any other food. Vegetable food is pure food. Vegetables are healthful. Grow more vegetables. Eat more vegetables.

A & M Garden Peas

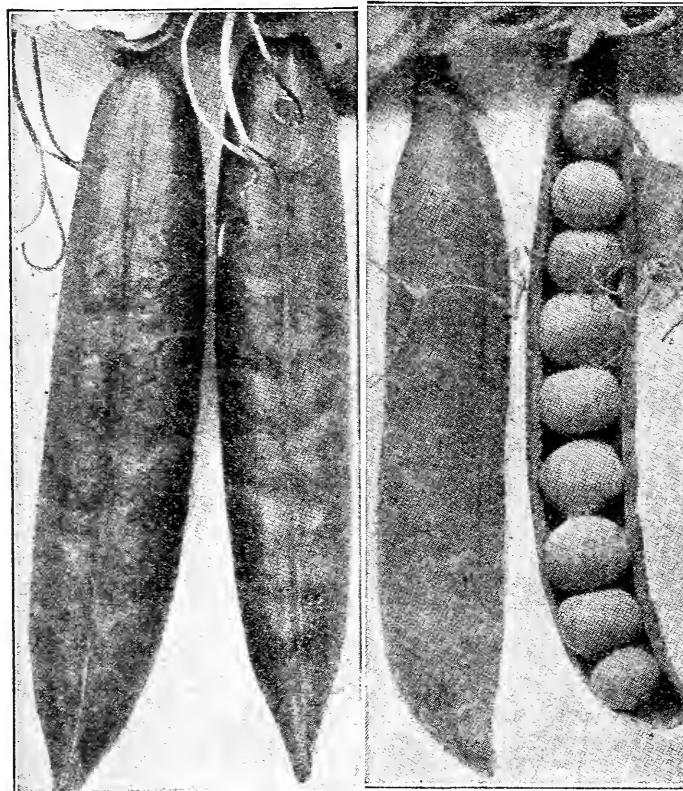
Write for quantity prices on all varieties.

Garden Peas Easy to Start and Grow

In planting garden peas in the home garden, first prepare the soil the same as for other crops, then scatter a little fertilizer where the row is to be planted, and rake this into the soil. Next stretch a line and make a deep mark with the corner of the hoe. The bottom of this mark should be at least two inches across so that the seed can be spread somewhat, and not crowded too closely together. Scatter the seed in this furrow, ten seeds to the foot, then cover about one inch deep and slightly firm the soil over the seed with the back of the hoe. About one week will generally elapse before the sprout appears above the ground.

At least three, and preferably four, plantings should be made at intervals of two weeks, in order to keep up a continuous supply.

There is nothing particularly difficult about the cultivation of peas—just keep them well hoed, and properly trained upon some kind of trellis.



Dwarf Telephone

Admiral

ADVICE: For the home garden we recommend Nott's Excelsior, to be planted for very early peas, the A & M Perfections for later crop. Any other of the late varieties offered here are good.

Culture—Peas are very susceptible to soil and climate. Within the radius of a few miles of Los Angeles, and in one locality or another peas may be grown every month of the year.

In a thermal zone plant peas from September 1st to February 1st, and in lowlands from January 1st to September 1st. In summer months, from May to September, plant two inches deep in heavy soil and deeper in sandy soil. From December to April plant not more than one inch deep. The object of this is to have the seed deep enough to lie in the moist earth, and shallow enough to get warmth from the sun. Never irrigate after planting peas until they come up. Irrigate before planting, but do not plant until the soil is tillable.

Peas will rot in soil that is too wet, especially during the winter months. They will stand a great deal of frost and cold weather until they bloom, but after they bloom a heavy frost will destroy the pods, and if cold enough, will kill the vines. Many planters sow one hundred pounds of seed per acre, but fifty pounds of seed per acre drilled in rows and well cultivated will produce larger pods and more peas per acre; besides, there will be less mildew. Put the rows north and south for winter planting to give them as much sun as possible.

At the first appearance of mildew spray with the best sulphur obtainable, and do the spraying in the morning. If your soil is sandy it would be well to inoculate the seed with Mulford Culture.

Stratagem A favorite in the San Francisco markets. The pods are of a dark green color and remain firm several days after picking. A very strong grower; very prolific, pods of good size and well filled. Vines stand upright about 2½ feet; an excellent variety.

Owing to the scarcity of the Dwarf Telephone for several years the Stratagem was established and it was then discovered to be a better shipper. Its dark green color made it a good seller in the Eastern markets.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

A & M Perfection Peas

During the past season this proved to be one of the most popular peas among market gardeners. The vines are vigorous and produce 25% more peas than the ordinary early varieties. Pods are large and well filled with tender, sweet peas of excellent flavor. May be planted during the winter months or early spring. What is good for the market gardener is certainly good for the home garden; therefore we recommend A & M Perfection for both. (Pkt. 10c) (½ lb. 25c) (lb. 40c) (10 lbs. \$3.50) prepaid.

Admiral or Senator This excellent variety was introduced locally several years ago with only a limited quantity to offer. Every grower who was fortunate enough to get some was extremely pleased at his good fortune. Has dark green foliage, profusely branching vines bearing abundantly of large, well-filled pods of delicious sweet peas that mature in twelve weeks from planting. The picture is of pods grown on our trial grounds, and shows the shape and actual size of the pod. It has had two years' trial and every gardener that once grows it wants it again. That is the best recommendation.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Tall Telephone Vines vigorous, growing about 4 feet high, with large, coarse, light-colored leaves and producing an abundance of very large pods filled with immense peas which are tender, sweet, and of excellent flavor. Throughout the south and by some growers in California it is preferred to all other varieties because of the hardiness of the vines and its large, well-filled pods, making it one of the best varieties to grow during the winter months for shipping.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Little Marvel It is indeed marvelous how prolific is this variety, two pods on every stem. The pods are three to four inches long, filled compactly. The peas are very sweet. Vines 18 inches. If you want an early prolific pea plant the Marvel.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Laxtonian A long time English favorite. Any variety that can hold its popularity for so long a time must indeed be a good pea. For your home garden you can plant no better.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Dwarf Telephone Medium tall; pods very large; medium green peas, very sweet; a favorite with shippers probably because it carries well and commands a high price because of quality.

For years this variety was grown more extensively for shipping than any other.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Gradus The largest of all extra early varieties; medium tall; quality superior to all other varieties.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Dwarf Gray Sugar (Edible pods.) Of extraordinary yielding qualities, and unsurpassed as an edible-pod variety.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Tall Gray Sugar (Edible Pods) Every family garden should have a row of these delicious peas. Prepare and cook same as string beans. They are sweet and delicious. They yield enormously. (Pkt. 10c) (½ lb. 20c) postpaid.

Little Gem Is a very desirable, extra early, dwarf, wrinkled variety, growing about 15 inches high. Very large, sweet, and of delicious flavor. (Per Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

American Wonder The earliest of all wrinkled peas. Of dwarf habit, growing from 9 to 11 inches high, and producing a profusion of good-sized and well-filled pods of the finest flavor.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Nott's Excelsior Although a few days later than the American Wonder, the pods will average fully one-third larger, containing 6 to 8 large peas, so closely packed together that they become flattened.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Yorkshire Hero A very popular market pea in this section. Abundant cropper and excellent in quality. Height 2½ feet.

(Pkt. 10c) (½ lb. 20c) (lb. 35c) (10 lbs. \$3.00) prepaid.

Notice all prices quoted on this page are prepaid.

GROW MORE PEAS—IT PAYS

Between the dates of April 20 and July 14 of this year they shipped 4,115 sacks of green peas to the Los Angeles, Chicago, New York and San Francisco markets. "The very good season has been reflected by very high prices on the premium paid for quality and flavor of peas over those from any other district," they tell us. Off one 3-acre patch, 583 sacks have been harvested, bringing over \$1,000 per acre, gross.

PESCADERO PEA GROWERS.



White Velvet

A & M Okra

A good and healthful vegetable for a summer crop.

Culture—Plant seed from April 1st until Aug. 15th. Plant six to ten inches apart in rows three feet apart. One ounce will plant one hundred feet of row.

A. & M. Early Greenpod

We have for a long time endeavored to produce an okra that is earlier than the White Velvet, which has long been the popular market variety. We have succeeded by selection, in producing not only an earlier variety, but a much more tender and prolific okra, and have named it Aggeler & Musser's Early Greenpod.

It is just the thing for truckers in the Coachella and Imperial Valleys, because it matures in April, fully a month ahead of other varieties; bears continuously until late in the season.

The pods are three to four inches long, deep green in color, and when young are absolutely stringless.

Every early trucker should have this variety. (Pkt. 10c) (oz. 20c) (1/4 lb. 45c) (lb. \$1.25) postpaid.

White Velvet

On account of its attractive white color, good flavor and tender pods when quite young, it has long been a favorite variety. (Pkt. 10c) (oz. 20c) (1/4 lb. 45c) (lb. \$1.25) postpaid.

Mammoth Long Pod We have greatly improved the original strain and now its productiveness is simply wonderful, the pods shooting out from the bottom of the stalk within three inches of the ground, and the whole plant is covered with them to the height of a man's head, five or six feet. Pods are an intense green in color, of unusual length, nine or ten inches, tender, and of good flavor. (Pkt. 10c) (oz. 20c) (1/4 lb. 45c) (lb. \$1.25) postpaid.

CHINESE OKRAChinese Okra
(Sin gwa)

This grows on a vine somewhat similar to a watermelon vine. It may be trained to grow on a trellis from which the fruit will hang like a gourd. The fruit may be cooked and served in every way that Okra is served. It should be peeled before cooking. If you are fond of okra, be sure to plant some of this in your garden. Plant about May 1st about the same as cucumbers. (Pkt. 10c) (oz. 30c)

A & M Parsley

Culture—Same as lettuce.

Plain or Smooth-leaved This variety has a richer curled varieties and should be preferred for the home garden. It is not profitable to the market gardener for the reason that the curled variety will produce much more per acre. (Pkt. 10c) (oz. 20c) (1/4 lb. 50c) (lb. \$1.50) postpaid.

Champion Moss Curled Extra dark. Leaves are crimped and curled, giving a most beautiful decorative appearance. (Pkt. 10c) (oz. 20c) (1/4 lb. 60c) (lb. \$1.75) postpaid.

Extra Double Curled A good curled variety for garnishing. (Pkt. 10c) (oz. 20c) (1/4 lb. 60c) (lb. \$1.75) postpaid.

Hamburg Turnip Rooted Fleshy vegetable roots for soups, etc. (Pkt. 10c) (oz. 20c) (1/4 lb. 60c) (lb. \$1.75) postpaid.

"Thank you sincerely for your catalog. Your seeds have proven good in past years."

G. W. BARBER, California.

"Thank you for your splendid book for when I read it, I wish for a larger garden."

MISS I. G. BRAMMER, Illinois.

A & M ParsnipsA & M
Parsnip**Our New French Parsnip**

Just right for the market gardener. The picture shows the actual size at time of marketing. It grows slightly larger, but it attains this size in ninety days, which is a full month earlier than other varieties. It is crisp and succulent. It will at once supersede all other varieties because of its all-round desirability. (Pkt. 10c) (oz. 30c) (1/4 lb. \$1.00) (lb. \$3.00) postpaid.

A & M Devonshire

This Parsnip was recommended to us by our European growers. It is scarcely more than half as long as the Hollow Crown, but it is often three inches in diameter. Tender and has an excellent flavor. (Pkt. 10c) (oz. 30c) (1/4 lb. \$1.00) (lb. \$3.00) postpaid.

A & M Hollow Crown

This is the favorite home garden sort to grow in a very mellow soil because it frequently grows two feet long, is very tender and has a particularly good flavor. (Pkt. 10c) (oz. 30c) (1/4 lb. \$1.00) (lb. \$3.00) postpaid.

A & M Peanuts

Write Department of Agriculture, Washington, D. C., ask for Farmers' Bulletin 1127.

READ—The Peanut is too much neglected. Its various uses are of great economic value. Its value as a food is well known, but few ranchers realize its value as a soil renovator, adding humus and nitrogen. As hog food, there is nothing better. The straw is rich in food value and may be pastured green, cured as hay or ensilage, and the yield of hay is often from two or more tons per acre. It grows on soil that may be too sandy for other crops. Therefore, if you have sandy soil, make it valuable by planting peanuts.

MARKET—There are a number of factories making Peanut Butter and by-products. It is here you can always find a buyer.

Reclaim poor sandy soil with peanuts.

Give an application of lime 500 lbs. per acre, and Toro sulphur 200 lbs. per acre.

Virginia Improved This variety is much superior to the ordinary Peanut, yielding fewer imperfect pods and combining earliness, productiveness and size; yields on ordinary land about 40 sacks to the acre. (Lb. 30c) (10 lbs. \$2.50) postpaid. Write for quantity price.

Spanish Hulled This is the small Round Peanut used so largely in confectionery lines. One would suppose that on account of the small size it would be unprofitable to grow. But not so. Mr. Moore, residing on the Laguna Ranch, says it is more profitable to the grower than the Georgia because it is enormously prolific, and grows in a compact bunch on a small vine so that they may be stripped easily by pulling the entire stalk through the hand instead of picking one by one. This advantage, together with the ready sale at a higher price, makes the small Spanish Peanut more profitable than the Georgia. (Lb. 35c) (10 lbs. \$3.00) postpaid. Write for quantity price.

Do not fail to read all sub-notes, in them you may find much valuable information.

You will find a reliable Garden Calendar on inside back cover.

A & M Peppers

THE SALAD PIMENTO



A & M
Anaheim
Chili
Actual
Size



A Typical Plant of Salad Pimento

Culture—For early green peppers, sow seed in hot beds in December and January. Transplant as soon as weather and soil in your locality will permit. For main crop sow seed in February, March and April, in hot bed. Pepper seeds need the heat of a hot bed to germinate it during these months. For fall and winter crop sow seed in out-door beds well prepared, during May and June. Winter crops can be grown in places that are entirely frostless.

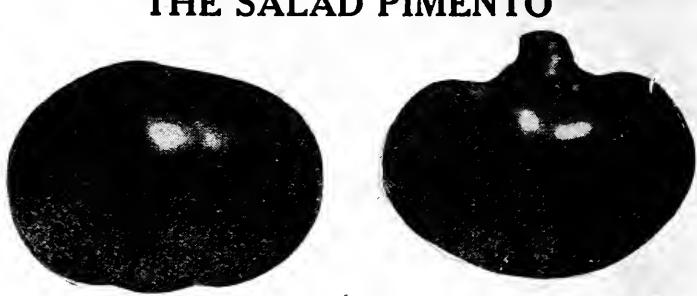
All large growers are now planting seed in the fields and thinning out. This does away with the expensive and tedious method of raising plants and transplanting, and is proving satisfactory.

For field culture the plants are set eighteen inches apart in rows thirty inches apart. This would appear too close when the full grown plant covers the field solidly; but it is important to get the rows as close as possible in order to irrigate effectively.

Considering the enormous acreage to peppers of all varieties the value to the grower, manufacturer and retailer is above \$2,000,-000 annually, which is no small unit toward the aggregate wealth of Southern California.

Much credit is due Aggeler and Musser Seed Company for their part in improving these peppers that made possible this big business..

Improving the old California Chili as it was in 1895 into the large thick meated Anaheim Chili of today, was the first good thing we had accomplished in the way of improving vegetables. Our success in this was probably the forerunner of the many good things we have introduced.



Salad Pepper (See back cover)

In our 1923 catalog under the headline "Progress" we made the statement that "The canner can now say to the grower, 'We want a vegetable with certain shape, size, flavor, firmness and color,' and in due time it will be produced."

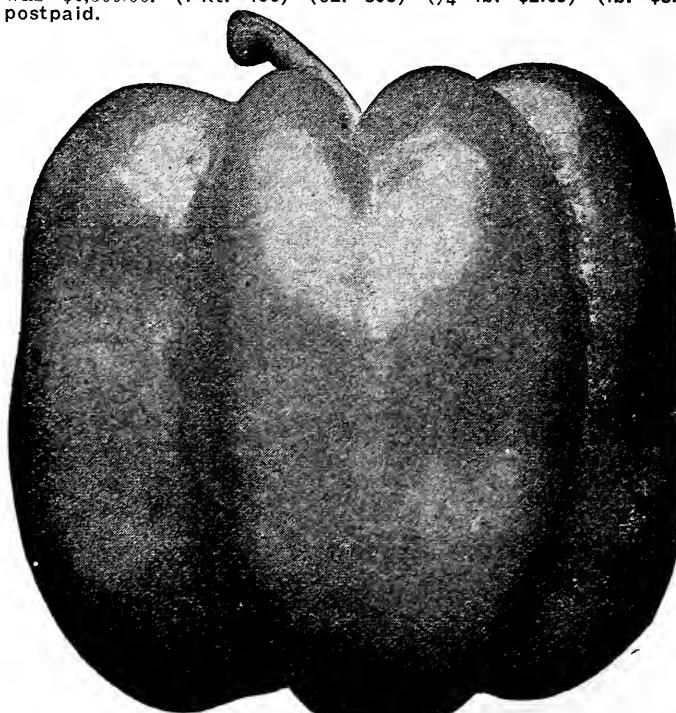
During 1920 we had just such an order for a certain type of pepper. We secured seed of two varieties that would be likely to produce the desired result. From a plot of several hundred plants, two were selected; all others were pulled up and all blossoms and fruit were removed from the two plants to allow new peppers to grow that would not be pollinated from others. It was late in the season and only ten peppers matured sufficiently to produce seed that would germinate. From these ten peppers we grew a small plot of about 1,000 plants of which about 200 were pulled up because the pepper could not be used. About twenty plants that were 100% perfect were selected for seed stock. The balance was used by the cannery.

The twenty plants were selected for size, color, shape, flavor, firmness, type of plant and productivity. From part of the seed of these twenty plants we grew a small plot of about five hundred plants. From the balance of the seed the cannery grew a very satisfactory crop, indeed only one plant from a field of forty acres was pulled out, all the rest were used, and never did a field produce so many peppers.

Of the five hundred plants grown in our experimental garden only nine were off type, all the rest were pure enough to be pronounced perfect.

What we offer this season has been grown from this pure seed. We have named it the Salad Pimento because it has the thick firm meat, mild flavor, bright red color of the pimento but more flat, perfectly smooth from stem to blossom. Uniformly smaller size of $1\frac{1}{4}$ inches to 2 inches in diameter, just right to put into the jar for which it was created. (Pkt. 10c) (oz. 75c) ($\frac{1}{4}$ lb. \$2.50) (lb. \$8.00) postpaid.

A & M Chinese Giant A very large pepper of the Bull Nose type, often growing to five inches in diameter. This is the variety grown so extensively in frostless sections for the winter trade, when the grower gets as much as 20 cents per pound for the green pepper. One grower claims that his returns from five acres was \$4,500.00. (Pkt. 10c) (oz. 80c) ($\frac{1}{4}$ lb. \$2.65) (lb. \$8.00) postpaid.



A & M Chinese Giant Pepper

MARKET—For the market gardener the Chinese Giant is the big money-maker. There are instances—in the foot-hill sections where they can be grown throughout the winter—where the grower sold \$900 worth from one acre, but as a mid-summer crop it is profitable because of its enormous production.

PEPPERS—(Continued)



A & M Ruby King

A & M Perfect Ruby King Ordinarily they grow about five inches long by three to four inches thick. Plant is of sturdy, bushy habit, and each one produces handsome fruit. This pepper is popular because of its solid, thick meat and mild flavor. (Pkt. 10c) (oz. 80c) ($\frac{1}{4}$ lb. \$2.65) (lb. \$8.00) postpaid.

A & M Royal Pepper

This is an improvement over the Ruby King. While retaining the same delicious flavor of the sweet peppers, it is thicker meated, so much so that it may be canned as is the Pimiento. It is particularly desirable for the table as stuffed pepper, because of the delicious flavor, fleshiness and cup shape.

It is another of the new things that we tried out before recommending it to our trade.

To gardeners we say do not hesitate because a crate of Royal Peppers will weigh as much as a crate and a half of Chinese Giant. (Pkt. 10c) (oz. 80c) ($\frac{1}{4}$ lb. \$2.65) (lb. \$8.00) postpaid.

Mexican Chili

The Mexican Chili has outclassed the Anaheim Chili by many hundreds of acres. We were taught that people living in hot climates were fond of hot peppers, but it seems that it was only a local habit, and that climate had nothing to do with it. The North and East have acquired the habit, and our shippers are having difficulty getting growers to keep pace with the market.

If you have rich sandy loam with irrigation available, there is big money in growing Mexican Chilis.

The Mexican Chili is in a class by itself, on account of its extreme pungency. It is not canned, but is used almost exclusively for grinding and sold as cayenne, the trade of which is surprising. (Pkt. 10c) (oz. 50c) ($\frac{1}{4}$ lb. \$1.65) (lb. \$5.00) postpaid.

Our seed is pure and taken from selected peppers grown far from other varieties.



The Royal

Mexican Chili
Big Money Maker

Floral Gem



Spanish Gem

Floral Gem This beautiful yellow pepper became popular several years ago. It is $1\frac{1}{4}$ inch in diameter, $1\frac{1}{2}$ to 3 inches long, delightfully pungent with a flavor quite distinct from other peppers, and commands an independent price. The supply has not yet caught up with the ever-increasing demand. This pepper turns from green to a beautiful waxy yellow. When mature it is red. It is marketed when yellow. (Pkt. 10c) (oz. 75c) ($\frac{1}{4}$ lb. \$2.25) (lb. \$8.00) postpaid.

Spanish Gem Like the Floral Gem it is very pungent with a flavor that is desired for pickling. In size it will average from $\frac{3}{4}$ to 1 inch in diameter, and 1 inch to $1\frac{1}{2}$ inches in length. It is marketed when quite yellow. (Pkt. 10c) (oz. 75c) ($\frac{1}{4}$ lb. \$2.25) (lb. \$8.00) postpaid.

Bell or Bull Nose Chinese Giant. It is similar in shape but scarcely more than half as large. It is much more prolific and a very desirable variety for the home garden. (Pkt. 10c) (oz. 80c) ($\frac{1}{4}$ lb. \$2.65) (lb. \$8.00) postpaid.

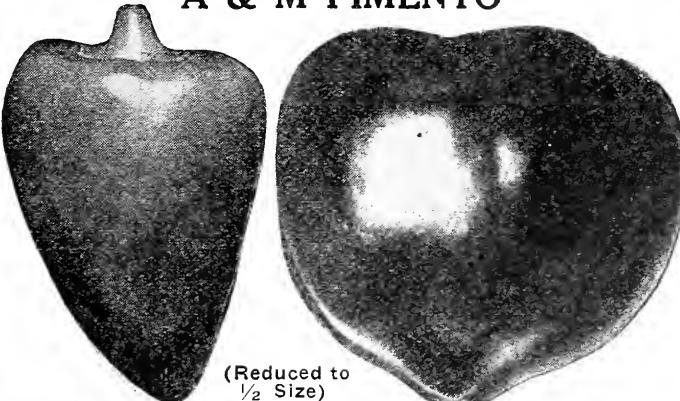
Small Chili This small pepper is $\frac{1}{2}$ inch in diameter, and two to three inches long. Is very pungent and marketed when quite green, although it is also sold when it has become red. It is an old time favorite and finds a market with canners and at stores catering to the foreign trade. (Pkt. 10c) (oz. 80c) postpaid.

Cherry A very pungent pepper, round as a cherry, about one inch in diameter, marketed when green. Used largely in pickling and by the foreign trade. There is a profit to the person who will specialize on this and other small pungent peppers. (Pkt. 10c) (oz. 80c) postpaid.

Anaheim Chili Pepper above all others for culinary use because of its agreeable pungency. Other pungent varieties are intolerable, not so with the Anaheim Chili. That is what makes it the best seller in the market and the best pungent variety for canning. (Pkt. 10c) (oz. 50c) ($\frac{1}{4}$ lb. \$1.65) (lb. \$5.00) postpaid.

Cayenne A long, slim pepper, rather pointed, and when ripe, a bright red color. Extremely pungent. (Pkt. 10c) (oz. 80c) ($\frac{1}{4}$ lb. \$2.65) (lb. \$8.00) postpaid.

A & M PIMENTO

(Reduced to $\frac{1}{2}$ Size)

As We Imported it in 1906.

As We Improved it

A Big Money Maker.

"OUR SEED IS PURE." Owing to the large acreage planted to Chili, the Pimento growers who planted seed of their own growing found their peppers badly hybridized with chili, resulting in a product that was ill-shaped and pungent, therefore could not be sold on the market nor to the canner. Our seed is pure and true to type, as one large grower testified by ordering his seed from us, discarding his own. He said: "I shall hereafter depend upon you for my seed, because it is the purest I have ever planted."

This pepper was introduced by us in 1911. It has become one of California's many staples, far out-ranking the Anaheim Chili as a canned product. This is because of its lack of pungency and its firm, thick fleshiness, which permits of its being scalped and peeled.

Every home garden should have a row of this Pimiento. For salad parboil it to remove the skin. Stuffed and baked it is far superior to all other peppers. (Pkt. 10c) (oz. 60c) ($\frac{1}{4}$ lb. \$2.00) (lb. \$6.00) postpaid.

A & M Potatoes

See Fertilizers

Write Department of Agriculture, Washington, D. C., for Bulletin No. 533, entitled "Seed Potatoes and How to Produce Them" **Essential Factors in Successful Potato Growing**

Treat seed stock before cutting. The very best seed may have traces of one or more of the many diseases to which potatoes are subject. It is, therefore, advisable to soak seed potatoes in a solution which will kill whatever disease may be lurking on the outside of the tubers. Make this solution by dissolving four ounces of **corrosive sublimate** in about two quarts of hot water (be sure it is thoroughly dissolved) in a glass jar and then add to thirty gallons of cold water in wooden vessels. A barrel or wooden tank makes a good receptacle for this purpose. Place the sacks of potatoes in this solution and leave one and one-half hours, then drain, and, if the potatoes are not to be cut immediately spread out to dry. Use the same solution for only four or five lots, as the strength becomes weaker the more it is used. This solution is poisonous and should be handled with care and kept where animals may not drink it. Treated potatoes should also be kept away from stock.

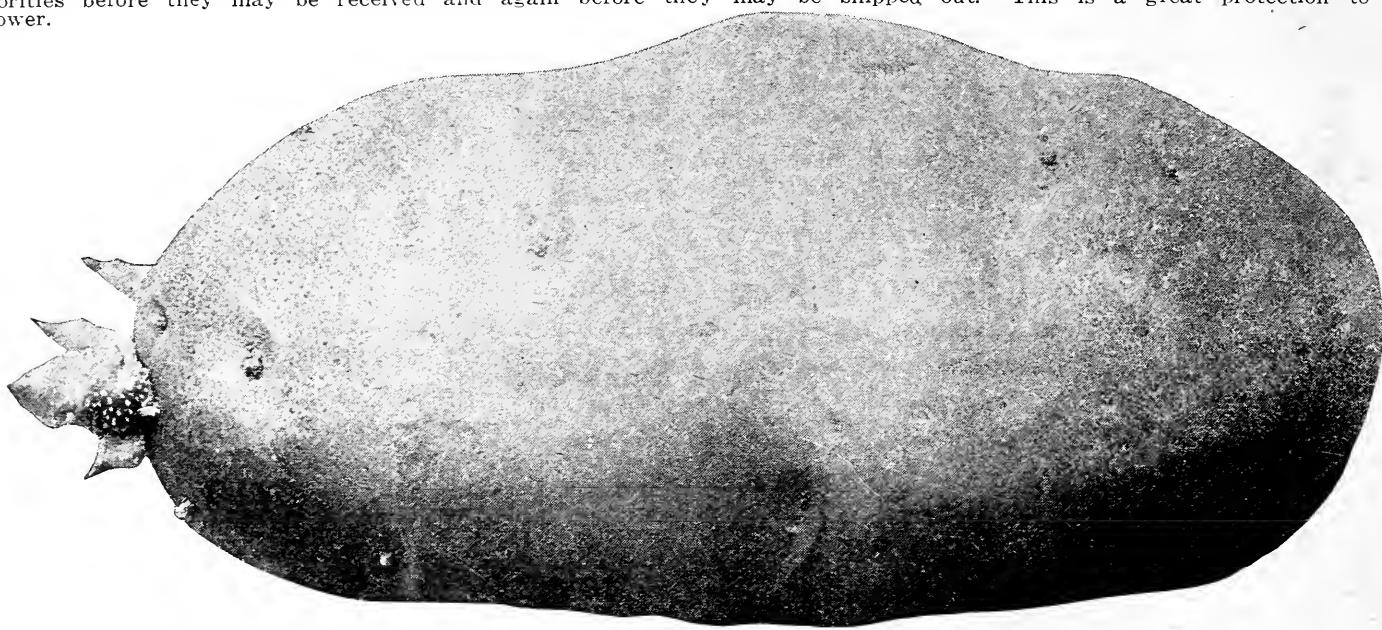
Plant four to five inches deep, 14 inches apart, in rows 30 inches apart.

If potatoes follow alfalfa or Melilotus good yields can usually be obtained without the use of commercial fertilizer; but commercial fertilizer will be found profitable.

Keep soil moist at all times. Do not judge moisture by appearance of the potato plants as when the plants become a very dark green or begin to turn yellow it is then too late to apply water for best results; and potatoes are likely to become rough and knobby.

When cultivating throw the earth toward the plants a little higher at each cultivation; until at last cultivation the ridges are six to ten inches high and broad at top so that tubers will be kept cool and free from tuber moth infection.

POTATO INSPECTION—All potatoes intended for seed purposes must be inspected by the County Horticultural authorities before they may be received and again before they may be shipped out. This is a great protection to the grower.



A Typical White Rose

A & M SEED POTATOES Certificate of Quality

Our potatoes were grown for seed purposes. They are carefully re-sorted, are in good condition when shipped and are recommended by us. You can do no better than to plant our seed potatoes.

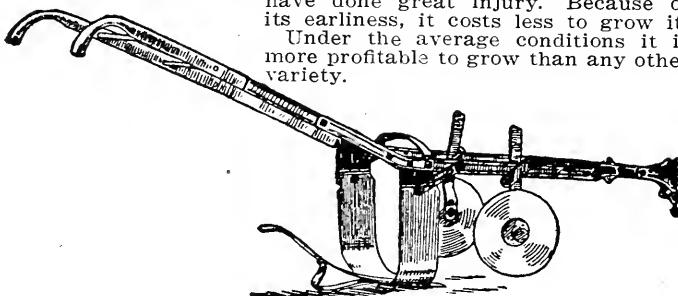
THE VARIETIES WE OFFER

It will cost you nothing to consult us, and may save you from making costly mistakes.

The White Rose We will have on hand throughout the planting season, clean selected seed of the popular varieties, but we recommend the White Rose for the reason that for twenty-five years it has proven more satisfactory than other varieties.

It is not particular as to soil. It matures quickly which makes it a good variety to grow without irrigation, besides it is out of the ground before nemetode and other enemies have done great injury. Because of its earliness, it costs less to grow it.

Under the average conditions it is more profitable to grow than any other variety.



Perine's Sweet Potato Digger

"Have used the Perine's Sweet Potato Digger this season and find it to be a most wonderful machine; has decreased my cost of digging 75 per cent. Gets all my potatoes and in excellent condition. Price \$55.00 f. o. b. here."

"Would be glad to have you refer anyone to me. Yours truly,
J. E. SWIFT, Van Nuys, Calif."
"I could not get along without it."
W. E. KIRKPATRICK, Burbank, Calif.

British Queen Many growers have excellent results with this variety. They have a fairly heavy soil and find it more profitable to plant for a fall crop; it does not mature early enough for spring planting to get the higher price.

We also offer selected seed of the following varieties: **Red Rose**, **Burbank** and **Triumph**.

Owing to the fluctuation of the market we cannot state price, but we request that when you are in the market for selected seed, write us stating the quantity you want.

It will cost you nothing to consult us. We may save you some costly mistake.

What is U. S. Grade No. 1?

U. S. Grade No. 1—This grade shall consist of sound potatoes of similar varietal characteristics which are practically free from dirt or other foreign matter, frost injury, sunburn, second growth, growth cracks, cuts, scab, blight, soft rot and damage caused by disease, insects or mechanical or other means.

The diameter of the potatoes of the round varieties shall not be less than one and seven-eighths inches, and of potatoes of long varieties one and three-fourths inches.

In order to allow for variations incident to commercial grading and handling, five per cent by weight of any lot may be under the prescribed size, and in addition six per cent by weight of any such lot may be below the remaining requirements of this grade; not more than two per cent by weight of the entire lot may have the flesh injured by soft rot.

A Van Nuys planter advises planting the tuber four to five inches under the original level surface so that as the rows are hilled, the tubers are finally covered seven to ten inches deep. This system provides for tubers being formed far enough below the surface that they have plenty of moist soil on top and they are well protected from the tuber moth.

POTATO VAT

Treating Potatoes by Dipping Them in Corrosive Sublimate Pursuant to our policy of doing everything to give our customers the best and cleanest seed possible we have installed a large vat in which all potato seed will be so treated, when requested, at a small additional charge, thereby insuring more and better Potatoes for Southern California.

Price for dipping seed is 35c per 100 lbs. up to one ton.

Price per ton is \$5.00.

NEW POTATO DISEASE IN STATE

The potato disease called "spindle-sprout" has become prominent this season for the first time in California in some of the northern counties.

A & M Pumpkin



For stock only, plant Mammoth King, Estampes, Cushaw, Kentucky Field or Cheese, Sandwich Island, Iron Clad and Connecticut Field.

For the canneries, plant Estampes, Kentucky Field or Cheese.

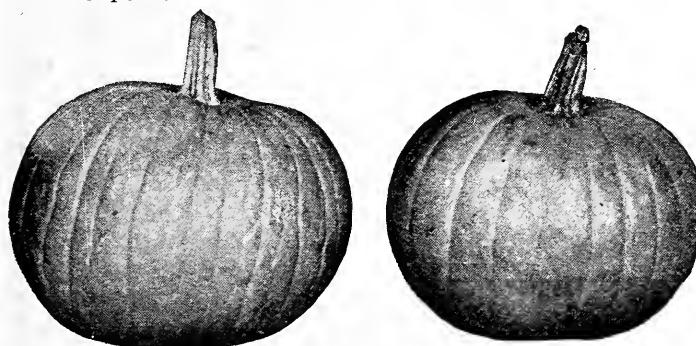
For the home, plant Boston Pie.

Culture—Pumpkins delight in rich, sandy soil that is perpetually moist—the soil that retains moisture by the dry farming method, because pumpkins do not want too much water, and to flood them would destroy them, so when irrigating make the furrows nearly as far from the hill as the tip of the vine, and when the vines intersect, run the water through the middle of the row. Plant the seeds every 8 or 10 feet, allowing only one plant to remain.

Kentucky Field or Large Cheese This variety is locally called Sweet Pumpkin, and is grown more than any other of its kind for stock, because it is a good keeper, notwithstanding it has a soft shell. It is fleshy and very sweet; also good for pie, and is largely used for canning. On one large ranch in the San Fernando Valley there was planted a large acreage to nearly all the popular varieties; this one was unaffected by the hot sun, and remained in perfect condition while other varieties were sun-burned and decayed quickly. (Pkt. 10c) (1/4 lb. 35c) (lb. \$1.00) postpaid.

Estampes We have the purest stock seed from which to grow this pumpkin. It is the heaviest pumpkin for its size that we know of; 100 pounds is not an unusual size for them to attain. It is the canner's favorite because of its thick, deep red flesh and the fine sweet flavor. It is without exception the best for dairy stock, and only the scarcity of the seed has prevented it from being more widely known. (Pkt. 10c) (1/4 lb. 50c) (lb. \$1.50) postpaid.

An Estampes Pumpkin, weighing 131 lbs., was grown on the ranch of Mr. Hathaway. His boys are active, intelligent farmers and dairymen, and give us the information that when they feed other pumpkins the cows eat them because they have to, and the milk contains only 3 per cent butterfat, but when they feed the Estampes, the cows are just crazy to get at them, and the milk contains 5 per cent butterfat. "Just to try it out, we again fed other pumpkins and the butterfat fell to 3 per cent."



Sugar, or Boston Pie

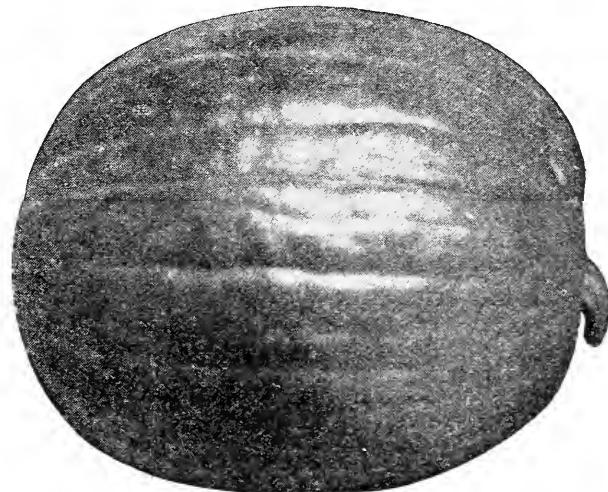
Sugar or Boston Pie A small handsome variety, and very popular. The skin is a deep orange yellow; flesh fine grained and sweet in taste. Famous in Boston as a pie pumpkin. It sells better on our local market than any other variety except the Jack o' Lantern at Hallowe'en time. (Pkt. 10c) (1/4 lb. 50c) (lb. \$1.50) postpaid.

Sandwich Island The most popular pumpkin in Ventura County. It is as hardy as a citrus. A good one to plant where water is scarce. (Pkt. 10c) (1/4 lb. 35c) (lb. \$1.00) postpaid.

Mammoth King This is the large pumpkin so well known locally. As many as 20 tons have been taken from one acre. It not infrequently attains a weight of 200 pounds. (Pkt. 10c) (1/4 lb. 45c) (lb. \$1.25) postpaid.

Japanese Pie (Green Cushaw) An excellent pumpkin for pies. The flesh is sweet and of a rich salmon color and free from fiber. It is very prolific; on this account it is profitable to grow for stock. (Pkt. 10c) (oz. 20c) (1/4 lb. 35c) (lb. \$1.00) postpaid.

Ironclad This is medium to large size, light gray color. Pumpkin. It will not sunburn, is an excellent keeper and of good flavor for pies. It increases the standard of butter fat when fed to dairy cattle. A dairyman from South Africa recommended it to us and sent us some seed from which we first grew our stock. (Pkt. 10c) (1/4 lb. 40c) (lb. \$1.25) postpaid.



Connecticut Field (Jack-o'-Lantern)

Connecticut Field (The Jack-o'-Lantern)—This is the pumpkin planted largely for the Hallowe'en and Thanksgiving trade, at which time they bring \$20.00 per ton, and two cents per pound at retail stores. Twenty tons to the acre is no unusual yield. If the land has been manured liberally a full crop can be grown among corn. It is a most excellent keeper, and will be sure wealth to all who grow and feed it liberally. (Pkt. 10c) (1/4 lb. 45c) (lb. \$1.25) postpaid.

Cushaw or Crookneck This excellent pumpkin ought to be planted more largely. There is more pumpkin for its size because of the small seed cavity. It is excellent for pies, and yields enormously. (Pkt. 10c) (1/4 lb. 50c) (lb. \$1.50) postpaid.

MONEY IN GROWING SQUASH AND PUMPKINS.—The canners consume enormous quantities. They use principally the Large Cheese pumpkins, paying about \$6.00 per ton. Next to the canners are the bakers, who use Hubbard Squash and Small Sugar, paying about \$20.00 per ton.

PLANT PUMPKINS AND CITRON FOR THE DAIRYMEN

If you have an idle space of rich sandy loam plant pumpkins any time from May 1st to August.

See the managers of your nearest cannery. Secure a contract with them to grow pumpkins.



Long White Icicle

GOOD

The Junior Republic at Chino, California is an active illustration of what may be done with the unfortunate boy from 12 to 16 years old.

Here they have a home with pleasant surroundings, sufficient food. These boys are well directed, put upon their honor to govern themselves after the manner of republican form of government. With the result that they become intelligent citizens, good farmers, dairymen, poultrymen, and gardeners. They like their work and dislike to leave the home when their age no longer permits them to stay.

They grow in their garden more than enough to supply the Republic.

They study this catalog and are guided by its instructions and declare there can be no better seeds than the A & M Brand.

The boys are bright and look it. Everything about the place looks like it is well managed.

A & M Radish

Culture—Seed may be sown the year round in California. Radishes thrive best in light, sandy loam, made rich with manure. Sow in drills 10 inches apart. An ounce of seed will sow a hundred feet of row, 10 pounds to the acre.

Early Scarlet Turnip

One of the earliest and best sorts for forcing; its color is very handsome; flavor very mild, crisp and juicy; stands a great amount of heat without becoming pithy. (Pkt. 10c) (oz. 25c) ($\frac{1}{4}$ lb. 85c) (lb. \$2.50) postpaid.

French Breakfast

A splendid variety, medium-sized, olive-shaped, very crisp and tender; of a beautiful scarlet color. (Pkt. 10c) (oz. 25c) ($\frac{1}{4}$ lb. 85c) (lb. \$2.50) postpaid.

Chartiers A distinct, exceedingly handsome and attractive sort; color of top scarlet rose, shading into pure waxy white at the tip. Attains a large size before it becomes unfit for the table. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid.

Early Long Scarlet

Very brittle and crisp; color a bright scarlet; small top. Six to eight inches long. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid.

Large White Chinese

This is a winter radish of deliciously sweet flavor; can be eaten as a turnip as it is without stringency. The Chinamen use this variety exclusively. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid.

Stump Rooted Half Long Scarlet

This variety should be more popular because it is just the right size for table use, not too large, never pithy, but always crisp and sweet. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid.

It is not generally known that Early Scarlet White Tipped Radishes may be planted at the same time with beets or turnips between the rows. The radishes will mature and all may be consumed before the turnips or beets are large enough to be crowded.



Scarlet Turnip White Tip

Scarlet Turnip White Tip

An early variety of medium size and excellent flavor, and of a very handsome appearance. (Pkt. 10c) (oz. 25c) ($\frac{1}{4}$ lb. 85c) (lb. \$2.50) postpaid.

Long White Icicle For the home garden we consider this a most excellent table variety. Its extreme earliness, beautiful pure white appearance, excellent flavor and crispness should make it a favorite everywhere. (Pkt. 10c) (oz. 25c) ($\frac{1}{4}$ lb. 85c) (lb. \$2.50) postpaid.

Crimson Giant A variety extraordinary in that, while growing to an unusually large size, it is always tender, crisp and of mild flavor. It remains in perfect condition a remarkably long time, and unlike other forcing varieties, does not become pithy; root turnip shaped; color a beautiful crimson; flesh firm and crisp. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid.

Japanese All Season

It is a very large, long, snow-white radish; deeply rooted, does not extend above the soil, hence it always is tender and crisp and has a delicious flavor. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid.

Japanese Winter A half-long white radish more adapted to our winter climate. It compares very favorably with our American varieties, besides it is much larger. (Pkt. 10c) (oz. 25c) ($\frac{1}{4}$ lb. 85c) (lb. \$2.50) postpaid.

Japanese Summer

Its beautiful white color and mammoth size attracts great attention. It is very tender and the flavor is exceedingly mild. It attains perfection in California, growing twenty-six inches in length and three inches in diameter. It is a profitable radish to grow, as it sells readily. It is excellent cooked as a turnip. (Pkt. 10c) (oz. 25c) ($\frac{1}{4}$ lb. 85c) (lb. \$2.50) postpaid.

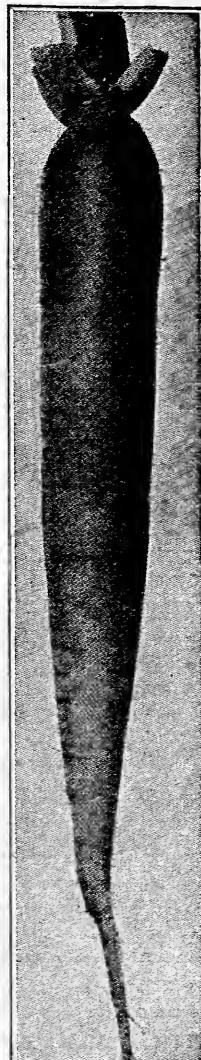
California Mammoth

Pure white; the flesh is tender, sweet and crisp, keeps well. Plant from September 1st to March. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid.

China Rose A delicious radish, crisp, with little tendency to become pithy. Skin is a beautiful deep scarlet and flesh pure white. It is a good seller and is in great demand by the vegetable peddlers. (Pkt. 10c) (oz. 20c) ($\frac{1}{4}$ lb. 65c) (lb. \$2.00) postpaid.



All Season



Chartier

A & M ROSELLE

Culture—Sow seed early in April in the field, four feet apart, in rows six feet apart. Cultivate as Okra. There is an early and a late Roselle. Be sure to get the early variety because the frost is almost sure to destroy the late variety before it matures. We offer only the early variety.

It is an annual plant that has been sufficiently tested to indicate its great value and to warrant more extended cultivation. The calyx surrounding the seed pod is used as soon as the flower drops for making jelly and jam. The jelly is superior to guava or currant, and labeled as "Queensland Jelly," is shipped from Australia to all parts of Europe. It is easily grown from seed if planted after the ground is warm; grows rapidly, resists drought and is very ornamental. Every home garden should have a row of this ornamental and useful plant. (Pkt. 10c) (oz. 75c) (1/4 lb. \$2.50) postpaid.

NOTE—Our local growers are not up with other localities in advertising and educating the public to the uses of Roselle. The local demand has never been fully supplied. Some one ought to get busy.

We have been advised by a lady from Texas, also one from Cuba, to remove the seed pod, and the jelly is thus greatly improved. The calyx is an excellent substitute for cranberry sauce or pie.

Having received numerous inquiries how to use Roselle, we have decided to insert the answer here. Pick the pods that grow at the axil of each leaf. Boil them until soft and strain through a cloth. Add 1/2 pint of sugar and the juice of 1/4 of a lemon to each pint of juice, and boil again until it jells.

The pods are ready for use in September. We are advised that excellent jelly may be made from the leaves. Therefore it will not be necessary to wait for the pods to mature.

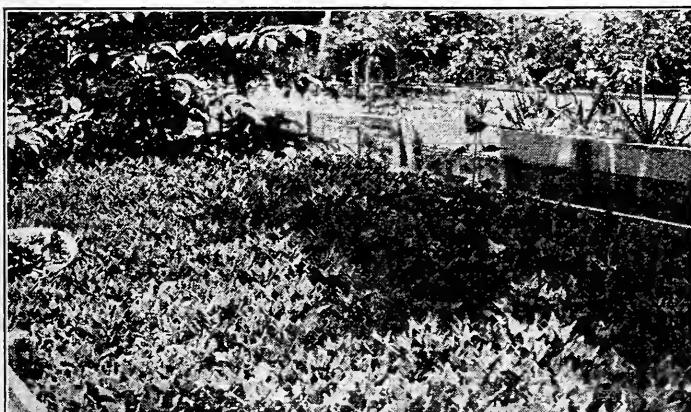
Put Roselle Pods in water to cover; let stand over night. In the morning strain, boil to one-half and put in cans; use when needed as lemon juice.

A & M SALSIFY

Culture—Sow the seed in the spring in drills one foot apart and one inch deep, thinning out plants to four inches. It succeeds best in light, well-enriched soil. One ounce of seed for 50 feet of drill.

Mammoth Sandwich Island A large and superior variety. Mild and delicately flavored. (Pkt. 10c) (oz. 30c) (1/4 lb. \$1.00) (lb. \$3.00) postpaid.

A & M New Zealand Spinach



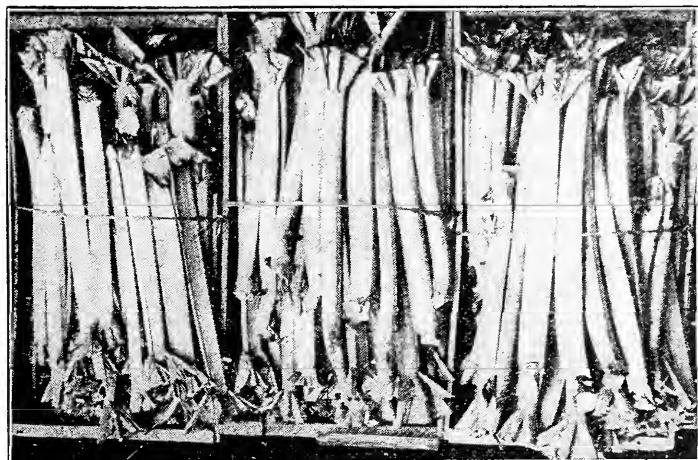
New Zealand Spinach Growing in a very shady spot. Try it.

A & M SORREL

Broad Leaved This is boiled and served like spinach. It possesses a very fine flavor. As the hot sun tends to increase its acidity, a partial shade is advisable. It should be sown in drills 18 inches apart. It is hardy but the roots should be divided every four years. (Pkt. 10c) (oz. 25c) (1/4 lb. 75c) (lb. \$2.25) postpaid.

A & M RHUBARB

Culture—Sow the seed any time from February 1st until July 1st, in drills two feet apart, in order that you may cultivate with a horse cultivator. Within five months after sowing the seed, the Wagner's Giant variety will be large enough to market, even though the roots are not larger than your thumb. Transplant at any time when the roots are as large as a pencil. Rhubarb requires a rich sandy loam, well drained. Never flood the crown nor bury it with soil. Therefore plant it on ridges or on the sides of an irrigating ditch. In our hot climate partial shading is beneficial. If you can do so, plant it in an orchard, setting the roots three feet apart, but if in a sunny place, set the roots 18 inches apart, that the leaves of one plant will shade the crown of another.



Panama Rhubarb in apple boxes, 18 inches long.

Giant Winter It is undoubtedly a very productive and therefore very profitable variety. It is displayed at the market places in apple boxes, and the boxes are barely long enough to accommodate the large, thick stems that will average one-half pound each, often weighing more than a pound. It is remarkably early, bearing large stems within five months from planting the seed, and grows nearly the entire year. The stems are so tender that they do not need peeling. (Pkt. 10c) (oz. \$1.60) (1/4 lb. \$5.00) (lb. 16.00) postpaid.

Panama Rhubarb We have persistently refused to offer any new variety of any vegetable unless it is better than that which we already have.

It was in 1911 when we first offered the Wagner's Giant Rhubarb. Since that time we have refused to believe there could be any better variety. The Panama, that has been advertised so extensively because of its hardiness and large yield, must be a very desirable crop for the man with a small acreage; and especially desirable for the home garden.

The Panama Rhubarb should be planted three feet apart in rows four feet apart, which would require 3,630 plants per acre from which \$500 would be a very conservative estimate of what may be realized. With a good market for the entire crop, \$1,000 may be realized. We have no seed. All roots are subdivisions, not seedlings. (1 root 50c) (5 roots \$2.00) (100 roots \$30.00) postpaid.

Every home garden should have a bed of New Zealand Spinach in some shady place. Where it is exposed to the extreme heat of the sun it becomes tough and bitter, but when grown under trees or shaded by shrubbery it is tender and grows luxuriantly all summer.

This picture shows a bed of New Zealand Spinach growing under trees and also shaded by shrubbery. This bed was started about six years ago. It re-seeds itself abundantly. Pick off the tips frequently. The more it is picked the more it produces.

New Zealand A spreading vine with numerous branches. One plant will cover an area four feet in diameter. The tender tips may be cut every few days and cooked as spinach; it is just as good. One packet of seed is enough for a family garden. (Pkt. 10c) (oz. 25c) (1/4 lb. 75c) (lb. \$2.25) postpaid.

Mountain Spinach Is quite distinct from the common varieties, but more productive. May be cut several times which makes it branch all the more. After several cuttings it will produce enormously of seed. The quality is excellent. Try it. Seed is limited, we offer it in packets only. One packet is sufficient for a family garden. (Pkt. 10c) postpaid.

Mountain Spinach is also called Orach.

A & M Spinach

MARKET.—On the local market there is a uniform demand throughout the year for home consumption, but during the winter months the shipper requires enormous quantities. The canners contract for large acreages each year.

Garden Culture.—Sow in drills, one foot apart, and for succession, every two weeks; select a shady spot; as it grows, thin out for use, keeping clean of weeds. It grows the year round in California. One ounce of seed for 100 feet of drill; 12 pounds to an acre. Field culture is the same as for lettuce but requires no thinning out. Better Spinach may be grown in the shade of an orchard.

The consumption of Spinach has increased enormously during the past few years. The amount shipped out of California to eastern markets amounts to several hundred car-loads, and the canners have packed during 1922, 1,190,525 cases as compared with 434,000 cases in 1921.

Spinach is well adapted to a large area in California and may be grown wherever the conditions are favorable for the production of vegetables. The yield per acre varies from three to five tons, with an average production of four tons. (As much as 8 tons have been grown). When selling to the cannery the customary price is about \$25 per ton.

"Spinach is best adapted to a rich, light loam and is not a satisfactory crop to grow on soils of poor quality or those which will not retain moisture. The climate requirements of this crop are very exacting. The plants will stand without injury a relatively low degree of temperature, but are seriously injured by heat. Planting early in the fall and late in the spring should be avoided since the plants will not make a satisfactory growth during hot weather. When planted during the rainy season, provided the soil is of a sandy nature and is free from weeds so that it will not pack, this crop may require no cultivation. The crop is ready to harvest in six weeks to two months after planting.

A & M Summer Success For several years we have type of Spinach that would prove profitable to grow in summer time, and after several trials this one proved the greatest success. With moist, loamy or peat land the A & M Summer Success will grow leaves 14 inches long. The leaves are very meaty and crisp. It is the best summer Spinach, but it is also the best winter growing variety. (Pkt. 10c) (1/4 lb. 25c) (lb. 75c) postpaid.



Bloomsdale—Viroflay

Viroflay This variety has become popular as an all-round Spinach. It is desired by the grower because it is harder than other varieties and will produce in tonnage per acre more than any of them.

The canner and shipper like it because of its large smooth leaves.

The consumer prefers it because it is exceedingly tender and of mild flavor. (Pkt. 10c) (1/4 lb. 25c) (lb. 75c) postpaid.

Bloomsdale Large green thick crumpled leaves, grows luxuriantly, producing twelve to fifteen tons per acre.

(Pkt. 10c) (1/4 lb. 25c) (lb. 75c) postpaid.

Broad-Leaved Flanders Is one of the best varieties for all purposes, and excels others for summer planting. (Pkt. 10c) (1/4 lb. 25c) (lb. 75c) postpaid.

Prickley Seeded Winter This variety thrives best in the coldest weather, and is the money-maker for the market gardener. Our seed is now American grown, and for several years has given entire satisfaction. The leaves are large, fleshy and very tender. (Pkt. 10c) (1/4 lb. 25c) (lb. 75c) postpaid

It is not generally known that spinach should be planted preferably in a semi-shady place about the first of September. It will be ready for the table within six weeks. When gathering it do not pull it up but cut it just above the crown. It will quickly grow and be cut again repeatedly. Thus a small bed of Spinach will yield enormously through a long season. This is important—be sure to follow these instructions.

A & M Squash

Winter Squash

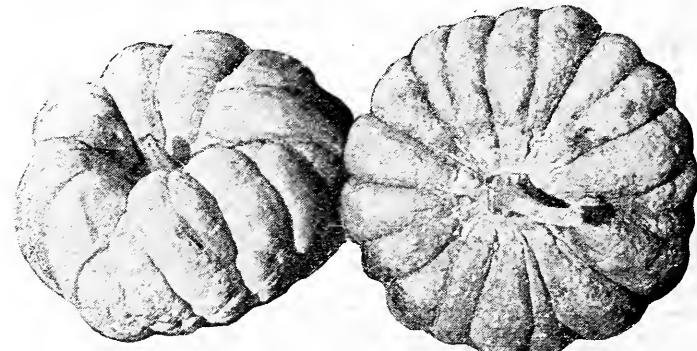
Culture—Seed should not be planted until all danger of frost is past. In open ground plant in hills ten feet apart where irrigated, and fifteen feet apart where not irrigated. In orchard plant only one row between trees. When the vine is well along do not flood the hill, but keep the irrigation furrow nearly as far from the hill as the length of the vine. Keep in mind that the roots are longer than the vines.



Green Warted Hubbard

Green Warted Hubbard This variety is grown more largely throughout the United States than any other. It is used in many ways, but mostly for pies. It is a good keeper and because of its hard warty rind, it is the best of shippers. Therefore many acres are grown in Southern California for that purpose, and many more for the bakers, the canners and family consumption. (Pkt. 10c) (oz. 20c) (1/4 lb. 50c) (lb. \$1.50) postpaid.

Fordhook Squash This is a most desirable squash for either summer or winter use. The vines are of strong, vigorous growth and wonderfully productive. Squash oblong in form, eight or ten inches in length, slightly ridged; smooth, thin, yellowish skin and of a yellowish color. If gathered young for cooking it is excellent, while if allowed to ripen on the vine they can be stored and will keep in good condition until late the following June. Either for baking like sweet potatoes or making pies during the winter, the squash is very fine. (Pkt. 10c) (oz. 20c) (1/4 lb. 60c) (lb. \$1.75) postpaid.



Chirimen

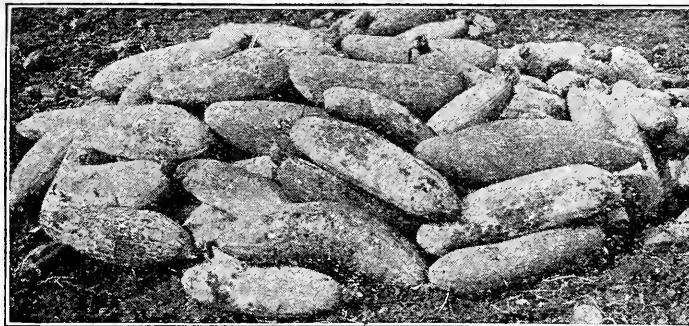
Chirimen (Japanese Winter Squash) This Squash is very popular with the Japanese. Because of other good varieties the American seedsmen overlooked a good thing. This distinctly Japanese Squash is very sweet and of delicious flavor, making good pie with very little sugar. The color when ripe is brown. It keeps until quite late in the spring, even longer than the Hubbard. Every home garden should have a few hills of this squash. (Pkt. 10c) (oz. 25c) (1/4 lb. 75c) (lb. \$2.00) postpaid.

Golden Hubbard The flesh is of a deep golden yellow—a much richer color than the Hubbard—fine grained, cooks very dry, and has excellent flavor. In its keeping qualities it is fully equal to the green variety. (Pkt. 10c) (oz. 20c) (1/4 lb. 65c) (lb. \$2.00) postpaid.

Pike's Peak An excellent winter squash. Fine grained and superior in flavor and keeping qualities to the Hubbard Squash, but not so well known. (Pkt. 10c) (oz. 20c) (1/4 lb. 50c) (lb. \$1.50) postpaid.

Boston Marrow Flesh, bright orange or rich salmon color; for sweetness and excellence is unsurpassed. (Pkt. 10c) (oz. 20c) (1/4 lb. 45c) (lb. \$1.25) postpaid.

A & M WINTER SQUASH—Continued



A & M Blue Banana Squash

A & M Banana This squash grows from one to two feet in length. Flesh firm and solid, of beautiful orange-yellow and excellent quality. It keeps from one season until another. When quite young it is excellent to cook as a marrow. (Pkt. 10c) (oz. 25c) (1/4 lb. 85c) (lb. \$2.50) postpaid.

When we introduced this Squash about ten years ago we predicted it would soon supersede the Hubbard because of its smooth rind, its resistance to the heat of the sun, and because of its excellent flavor. A larger acreage is now planted to Banana than to Hubbard.

"I've tried all over Oakland and Alameda for some Banana Squash and no one seems to have heard of it and insisted I meant Crookneck. I have eaten Banana Squash and think it is the finest I've ever tasted, so kindly send me a package."

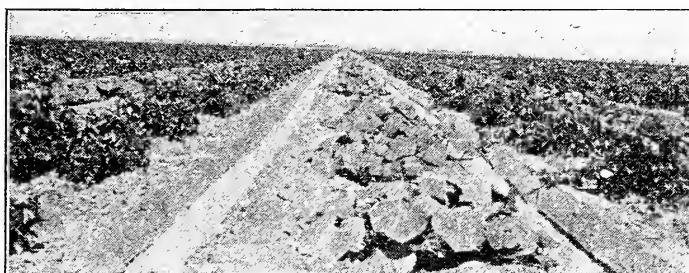
MRS. A. C. THOMAS, California.



Cocozelle

Cocozelle An excellent squash for many purposes. Equal to the White Bush Scallop for the table when taken quite young. It is enormously prolific. When gathered closely and fed to stock, the vines will keep bearing continuously all summer, and far into the fall. It survives drouth to a wonderful degree. (Pkt. 10c) (oz. 25c) (1/4 lb. 85c) (lb. \$2.50) postpaid.

Italian Squash Is a bush variety, and should be planted 5 feet apart. It should be used when quite young. When served it has a rich creamy flavor not equalled by any other squash. Some gardeners have made considerable money making a specialty of it. For the family garden we would recommend its use instead of the small White Bush Scallop, because of its excellent flavor. Since our introduction of this squash a few years ago, it has now become one of the staple products on the market. It is listed with the daily market reports, and is grown largely by the gardeners in frostless sections for the early trade. (Pkt. 10c) (oz. 20c) (1/4 lb. 65c) (lb. \$2.00) postpaid.



If you are starting a vineyard or an orchard, for one or two years you can more than make expenses growing Banana Squash.

English Cream Marrow It is as sweet as a sweet potato, and has none of that pumpkin flavor. It is good any way it comes on the table, and is better than Hubbard Squash for pie. It is 6 to 8 inches long and half as thick. Decidedly firm. It will keep from one season to another. (Pkt. 10c) (oz. 20c) (1/4 lb. 60c) (lb. \$1.75) postpaid.

NOTE—Owing to the low price of Hubbard Squash during the fall of 1921, there was a very small acreage planted last season with the result that Hubbard Squash was shipped in from Utah and sold at the wholesale market for \$40.00 per ton. Plant more Hubbards this season.

Here Are Some Causes for Crop Failures

SOIL—Not chemically or physically adapted to the requirements of the crop; not properly prepared; too much or too little moisture.

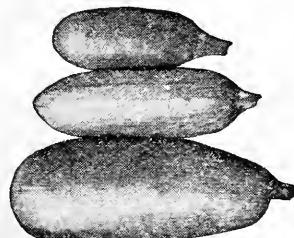
CLIMATE—Variety planted out of its season; unseasonable weather; extremes of heat and cold; excessive rain or drouth.

CULTURE—Variety not adapted to conditions; improper planting, improper cultivation, improper irrigation, improper fertilization; inattention to insects and diseases.

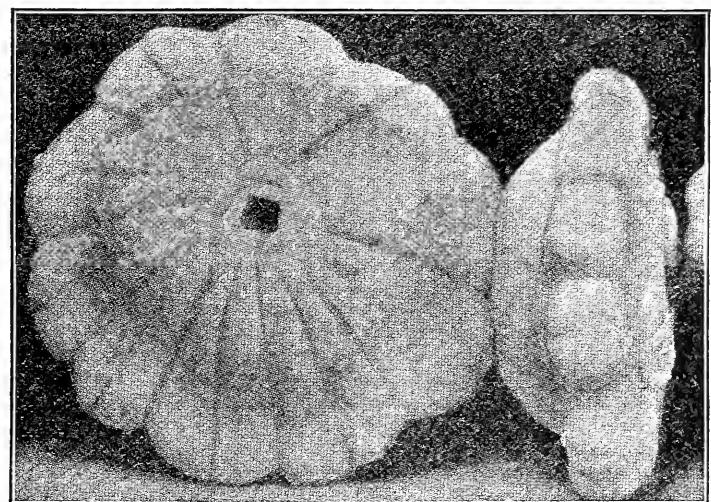
SEED—Unwise selection of variety; inattention to purity and germination; indifferent about pedigree and source.

It is up to you to avoid or correct as far as is possible.

SUMMER SQUASH

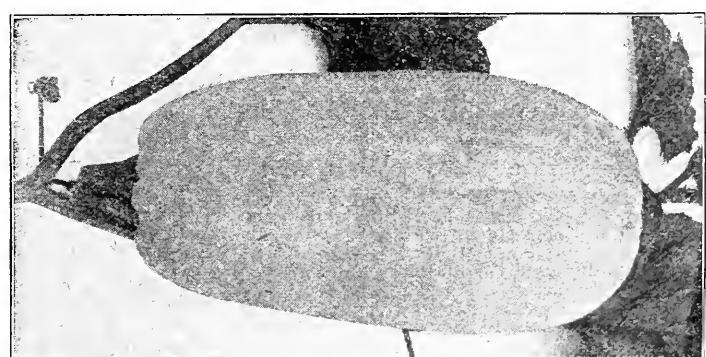


Golden Summer Crookneck The popular well known Crookneck (Pkt. 10c) (oz. 20c) (1/4 lb. 50c) (lb. \$1.50) postpaid.



A & M White Bush Scallop

A & M White Bush Scallop The well known summer squash that has been the standard for more than fifty years, and always in demand because of its earliness and it is delicious on the table whether stewed or fried as Egg Plant. (Pkt. 10c) (oz. 20c) (1/4 lb. 40c) (lb. \$1.25) postpaid.



Long White Marrow

Long White Marrow This is exceedingly delicious as English Marrows. Steamed when quite young or fried as egg plant it is equal to egg plant itself. The squash is about 12 inches long when mature, and has a light creamy color. It grows luxuriantly and bears abundantly all summer under very adverse conditions. It will grow, when continuously harvested, more food for hogs than pumpkins. (Pkt. 10c) (oz. 20c) (1/4 lb. 60c) (lb. \$1.75) postpaid.

KITCHENETTE HUBBARD SQUASH

This squash was developed at the University Farm, St. Paul, Minn. It is a small Hubbard developed by inbreeding and selection as to type of plant, quality and size of squash.

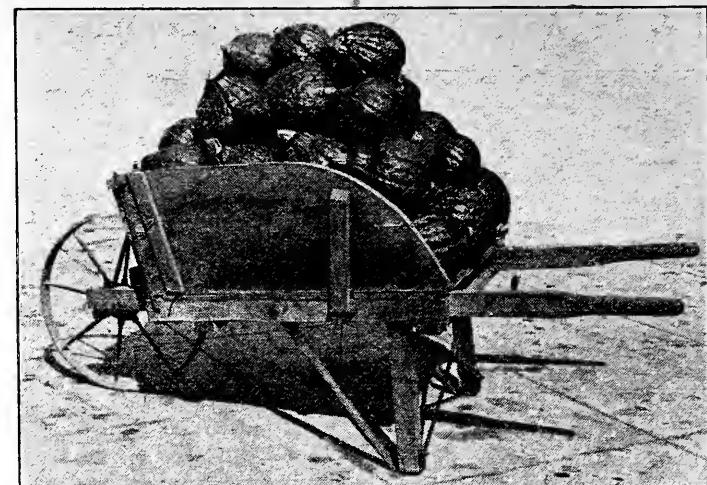
The ordinary Hubbard squash is too large for one family to use, therefore when one is cut a portion of it is wasted. Then too, the quality is not uniform.

Now by several years of selection they have developed a Hubbard that will average 5 pounds in weight, is a glossy, dark green color, equal to the best Hubbard in quality, two weeks earlier, yields as large a tonnage per acre and keeps as well in storage. It is just the right size for family use, hence its name.

This wheel-barrow load was gathered from three hills. There are just 36 squash on the wheel-barrow.

(Pkt. 10c) (oz. 25c) ($\frac{1}{4}$ lb. 75c) (lb. \$2.00)

See the Sunshine Sprinkler for the little lander



Thirty-six Kitchenettes, one Wheel-barrow Load

A & M TOMATOES

If you are growing Tomatoes for the shipper, ask for circular of cultural instructions.



In response to many requests how tomato plants may be protected, we have secured this picture which illustrates how it is done in Imperial Valley. A frame is made with twigs of arrow-weed with newspaper inter-woven. This protection is on the north side leaving the plant exposed to the sun on the south. This is placed when the seed is planted. A small pinch of seed is planted in each hill. When it is thought safe to do so, all plants but one are pulled out.

Culture.—Tomatoes do best on light warm, not over-rich soil, and success depends upon securing a rapid, vigorous and unchecked growth during the early part of the season. Sow in hot-beds from 6 to 8 weeks before they can be set out of doors, which is when danger from frost is past.

Transplant three to six feet apart in rows four to six feet apart, according to variety—three feet for those varieties of upright growth, as the Dwarf Champion, and six feet is not too far apart for vining varieties which soon cover the ground solidly. The soil should be plowed and pulverized to a depth of ten or twelve inches, the deeper the better, in order that the roots may keep in the cool earth, for as soon as the roots are heated by the hot, dry soil near the surface, the plant quickly sickens and dies, and the grower can see no cause for it.

In the early fall when the nights have become cool and heavy dews prevail, it would be well to spray with Bordeaux Mixture, to prevent blight. It may be necessary also to spray after each rain throughout the winter.

To prevent root-blight, pour a cupful of Bordeaux around the stem at the surface of the ground.

The time of planting and variety depend upon your local market, soil and climatic conditions, and the purpose for which they are grown.

On sandy loam soil near the foothills, where it is nearly frostless, we recommend planting seed of the A & M First Early in hot beds during December and January for winter and early spring tomatoes. Tomatoes that mature the latter part of April are considered early for Southern California.

Plant seed of the Stone and Greater Baltimore varieties during April, May, June and July, for the summer and fall crops, also for canners and shippers.

For the home garden plant the HOME TOMATO and the Ponderosa.

Tomato-Leaf Blight Losses May be Avoided By Spraying with Fungi-Bordo

"I wouldn't grow tomatoes in a blight-infested region without spraying," says S. L. Dodd, Jr., extension pathologist for the United States Department of Agriculture and West Virginia Agricultural Experiment Station, who sprayed tomatoes for the control of blight in six counties of West Virginia in 1918. Thorough spraying was the keynote of his success. He made six, and in some fields seven applications, using spray mixture at the rate of 150 gallons an acre for mature plants. Spraying improved color and solidity of fruit, reduced rot and sunscald, and increased the yield of ripe fruit 39 per cent, and of both green and ripe fruit 55 per cent.

Small Sprayer Effective

A small compressed-air sprayer was used in this work. Such sprayers are light, easy to operate, and produce a fine misty spray.

To reduce the work of preparing spray mixtures, the following stock solutions were made: Five pounds of copper sulphate (blue stone) were dissolved by suspending it in a wooden vessel containing 5 gallons of water. Five pounds of stone lime (quickslime) were slacked in another vessel by slowly adding water at first and later increasing the volume to 5 gallons. Three pounds of resin fish oil soap were diluted in a third vessel by stirring it in hot water until thin and increasing the volume to 5 gallons by adding water of ordinary temperature.

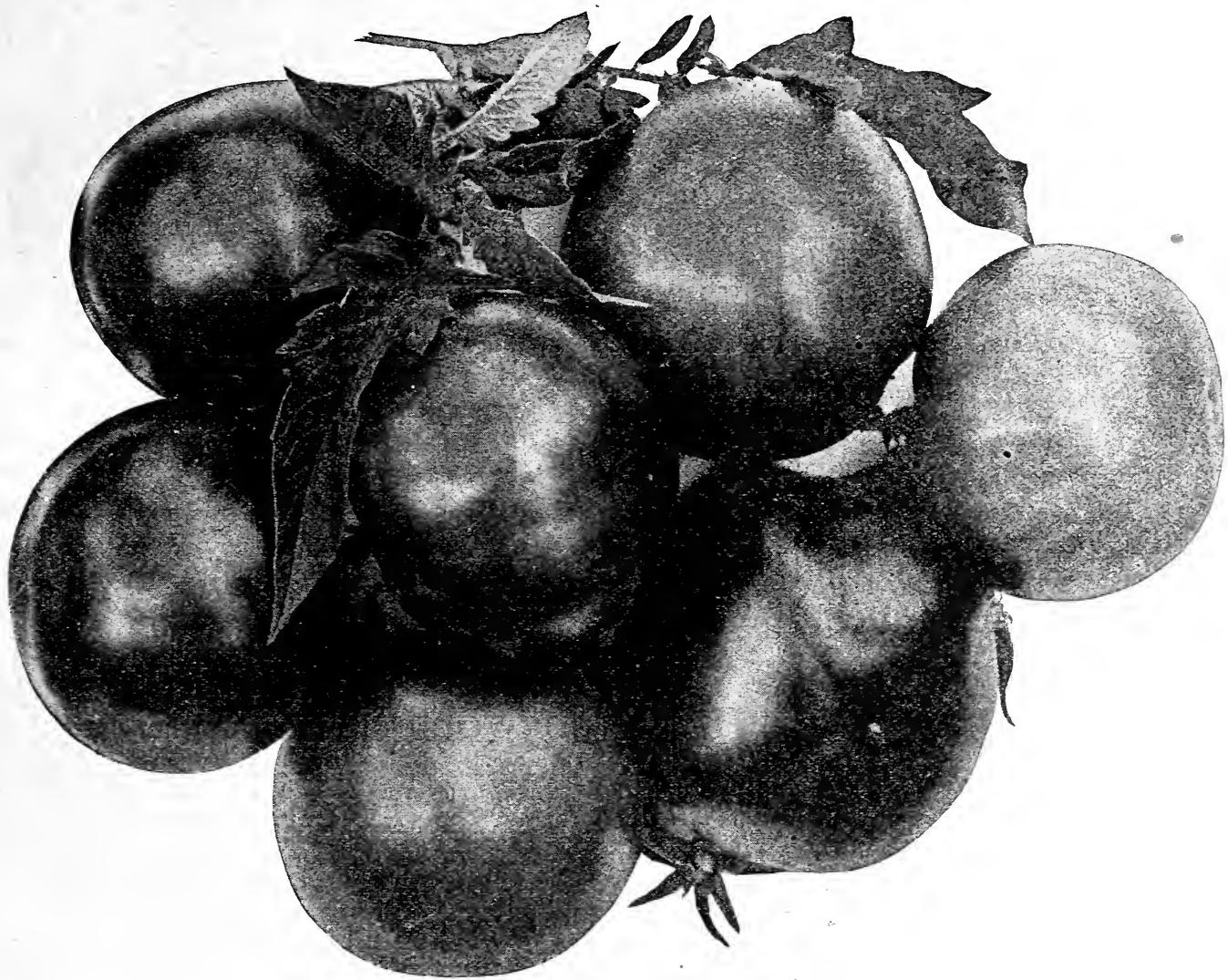
These stock solutions keep indefinitely if not mixed or weakened by rain, but the lime should be kept covered with water to prevent drying out. The level of the liquid when freshly made and after each spray period should be marked on each vessel, and water added when needed to restore loss by evaporation.

Ten gallons of spray mixture are prepared by taking 1 gallon of each freshly prepared ingredient. Mix and dilute with water to ten gallons.

"I have always excellent results with the A & M seeds. Every one says our tomatoes cannot be beaten."

MRS. GEO. BURLAGE, California,

A & M TOMATOES



A & M First Early
In the \$1,000,000 Class

Tomato Hints

Picking and Hauling the Fruit.—Pick carefully and watch your pickers.

Do not disturb the vines any more than can be helped. Impress that upon your pickers.

The early planting is done in sheltered places along the foothills and along the coast, also in Coachella and Imperial Valleys. This crop matures during April and May and is shipped to all parts of the United States.

The Mid-Summer crop is set out at any time from April 1st until July 1st. This comprises the large acreage planted throughout the southwest for local consumption and for the numerous canneries. We have no figures as to acreage planted for this purpose, but it is enormous.

July 1st to October 1st and October are the months for planting Tomatoes for mid-winter consumption. Usually the local market absorbs the entire crop.

Our advice is that it is profitable to grow Mid-Summer Tomatoes for the canneries at a satisfactory contract price. It is too much of a gamble to grow a large acreage for the open market.

It is profitable to plant as late as August 1st in foothill sections.

Your crop is then likely to be in its prime when the colder locations will have been destroyed by frost.

This too is about the time when the demand comes from the East.

Two of the main tomato pests in Los Angeles county are the big tomato worm and the corn ear worm. The Farm Advisor's office reports that good control work on these worms can be had by dusting at intervals with a mixture of one part finely powdered lead arsenate to four parts of hydrated lime.

The same formula is effective against flea beetles and certain other insects which attack the young plants and some growers are commencing to dust shortly after setting in order to keep ahead of the succession of pests damaging both foliage and fruit.

A & M First Early for the early market. We introduced the A & M First Early in 1909, and from that time to the present it has superseded all other early varieties throughout Southern California, and is constantly growing in popularity here and elsewhere. For a first early money-maker, it has no equal in the tomato line. We cannot give it too much praise. The growers are not looking for an earlier one. It is good enough. (Pkt. 10c) (oz. 50c) ($\frac{1}{4}$ lb. \$1.75) (lb. \$5.00) postpaid.

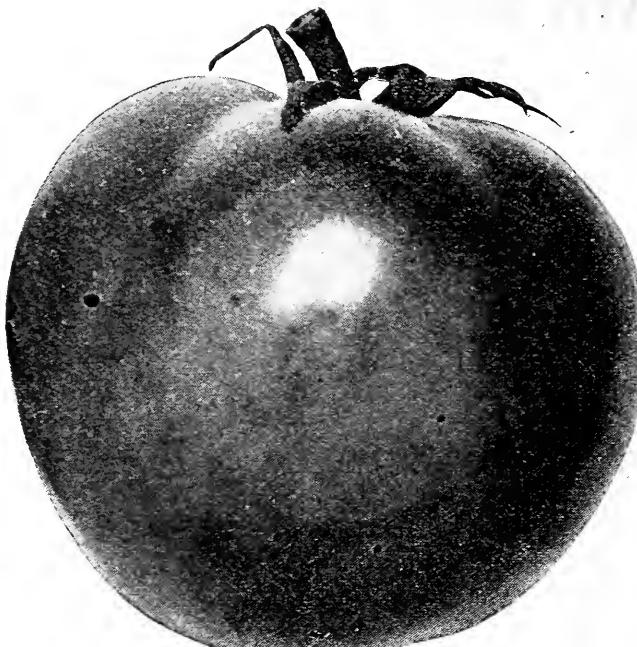
Earliana The plants are quite hardy, with rather slender branches and moderate growth, well set with fruits, nearly all of which ripen very early in the season. The tomatoes are bright red and close together in clusters of five to eight; all of medium size, averaging $2\frac{1}{2}$ inches in diameter. (Pkt. 10c) (oz. 40c) ($\frac{1}{4}$ lb. \$1.35) (lb. \$4.00) postpaid.

Bonnie Best Extra early, bright red, uniformly smooth, medium sized, solid and very prolific. It is very popular among growers of early tomatoes throughout the United States and wherever it has been tried. (Pkt. 10c) (oz. 40c) ($\frac{1}{4}$ lb. \$1.35) (lb. \$4.00) postpaid.

John Baer has exceeded every claim we made for it. It enabled the canners to begin two weeks earlier. Every tomato a smooth one. It is very prolific, every cluster bears four or five uniformly sized smooth tomatoes red from blossom to stem. We recommend it for heavy soils and for planting in young orchards. It has naturally a scant foliage suitable for early maturing, but will yield ton for ton with the Stone. For early local market and early canning plant the John Baer. (Pkt. 10c) (oz. 50c) ($\frac{1}{4}$ lb. \$1.75) (lb. \$5.00) postpaid.

Chalk's Early Jewel Excellent early tomato for home or nearby market; very prolific, red, smooth and desirable size. Its mild flavor makes it desirable as a salad. (Pkt. 10c) (oz. 40c) ($\frac{1}{4}$ lb. \$1.35) (lb. \$4.00) postpaid.

A & M TOMATOES—Continued



A & M Globe

A & M Globe This variety has become very popular with the large growers in old Mexico. They have learned that when it has turned from the green to a lighter color with just a suspicion of red it is in prime condition to ship to the farthest market with the least deterioration. It is nearly as round as a globe, produces abundantly and is a delightful table variety, almost without acidity, and is now considered the best shipper for the farthest market. (Pkt. 10c) (oz. 45c) ($\frac{1}{4}$ lb. \$1.50) (lb. \$4.50) postpaid.

The Early Shipper It is very prolific, medium to large size, and red all over. It is very profitable to the early shipper. It is equal to the Stone for canning and has a better flavor. If you are growing for the early market, do not hesitate to plant it. (Pkt. 25c) (oz. \$1.50) ($\frac{1}{4}$ lb. \$5.00) (lb. \$15.00).

Dwarf Stone (Tree Tomato)—Large, red, smooth and solid. The stalk is upright with dense foliage protecting the fruit from the heat of the sun. It is a desirable tomato to grow in the interior valleys. (Pkt. 10c) (oz. 40c) ($\frac{1}{4}$ lb. \$1.35) (lb. \$4.00) postpaid.

San Jose Canner This variety is a favorite with canners for the sole reason of its enormous yield of large tomatoes regardless of shape. We recommend it where tonnage is desired above all else. (Pkt. 10c) (oz. 75c) ($\frac{1}{4}$ lb. \$2.50) (lb. \$7.50) postpaid.

Ponderosa A very large, purple tomato with few seeds and of excellent flavor. Our strain is round and smooth—not the usual oblong wrinkled kind. Favorite for the home garden. (Pkt. 10c) (oz. 65c) ($\frac{1}{4}$ lb. \$2.20) (lb. \$6.50) postpaid.

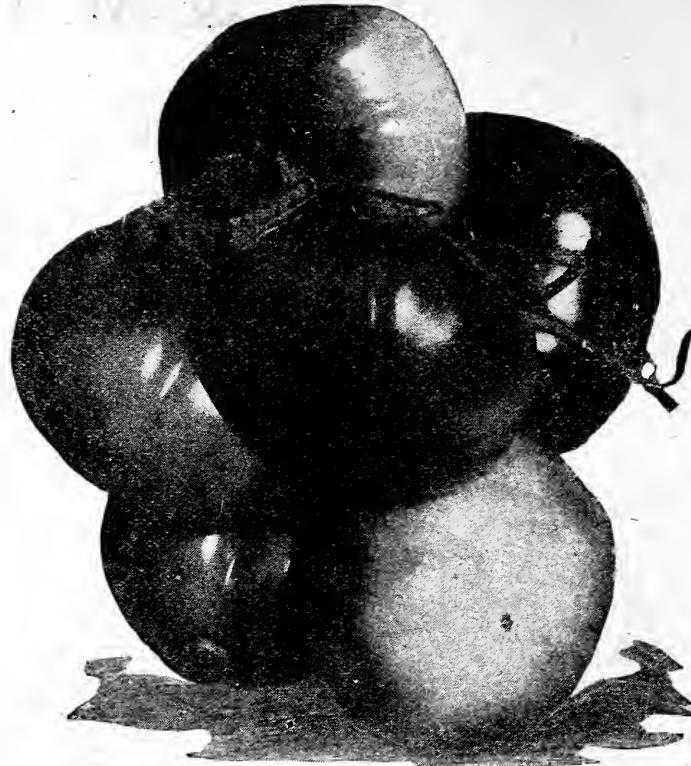
Dwarf Ponderosa A large tomato on a small vine; just the thing for a small garden. The tomato is delicious. (Pkt. 10c) (oz. 75c) postpaid.

Golden Ponderosa A very large yellow tomato having a delicious flavor. It is ideal for salads and with a little finely sliced lemon makes excellent preserves. It yields enormously. We recommend it for the home garden. (Pkt. 10c) (oz. 75c) ($\frac{1}{4}$ lb. \$2.50) (lb. \$7.50) postpaid.

June Pink The most popular extra early tomato grown in the South and East. It is very prolific and may be compared with the A & M First Early except its pink color. (Pkt. 10c) (oz. 40c) ($\frac{1}{4}$ lb. \$1.35) ($\frac{1}{2}$ lb. \$2.25) (lb. \$4.00) postpaid.

Dwarf Champion (Tree Tomato)—Has long been a favorite midsummer tomato. Pink in color, smooth and solid, making it a good shipping variety. This has proven very satisfactory in Arizona. Its dense foliage protects the fruit from sunburning. (Pkt. 10c) (oz. 40c) ($\frac{1}{4}$ lb. \$1.35) (lb. \$4.00) postpaid.

It is not generally known—that when you are unable to obtain tomato plants you may have vines by planting cuttings from old vines. If you do not have any old vines maybe your neighbor will permit you to get cuttings from his vines. A cutting should be about eighteen inches long and cut just below a branch or leaf joint. Plant twelve inches below the surface of the ground, pinch off all large foliage but the terminal bud. It will grow rapidly.



Burwood Prize

BURWOOD PRIZE—Another New One

There would be no justification to add to our long list of varieties but each one seems to have a purpose for which it is particularly suited. Therefore we are adding one more to our already long list of varieties. The Burwood prize. A large scarlet tomato having a delightfully mild flavor desirable for salads and for all round cooking. It is an ideal tomato. If you would build up a trade with exclusive hotels, grow this prize tomato. (Pkt. 10c) (oz. 50c) ($\frac{1}{4}$ lb. \$1.50)

The Home This tomato when trellised to shade a window or to cover an unsightly corner will grow 12 feet high and as wide, bearing early and late pink tomatoes of good average size and unsurpassed flavor. It is an ideal home tomato and is also ideal to grow in the south for winter shipping, where a pink tomato is preferred. (Pkt. 10c) (oz. 40c) ($\frac{1}{4}$ lb. \$1.20) postpaid.

See Tomatoes on back cover.

The Home Tomato Growing in Maryland

Sirs: I am growing your "Home Tomato" this season and it is the finest quality of any tomato I have grown in twenty years; very prolific and nice large fruit of beautiful color and uniform in shape.

JOHN H. GRIFFITH, Ruxton, Baltimore, Md.

Sept. 5, 1918.

Greater Baltimore We offer this variety because some canners insist upon having it. In appearance it is similar to the Stone, enormously productive. We give it our full endorsement to any who would grow for the canner. (Pkt. 10c) (oz. 60c) ($\frac{1}{4}$ lb. \$2.00) (lb. \$6.00) postpaid.

"A few lines in regard to the Tomato seeds I bought of you last year. The Greater Baltimore, I will say they cannot be beaten. The cannery where I sold them told me they were the finest tomatoes they had ever used."

Every one who saw my patch said they were the finest tomatoes they had ever seen in average size, flavor and prolific bearing."

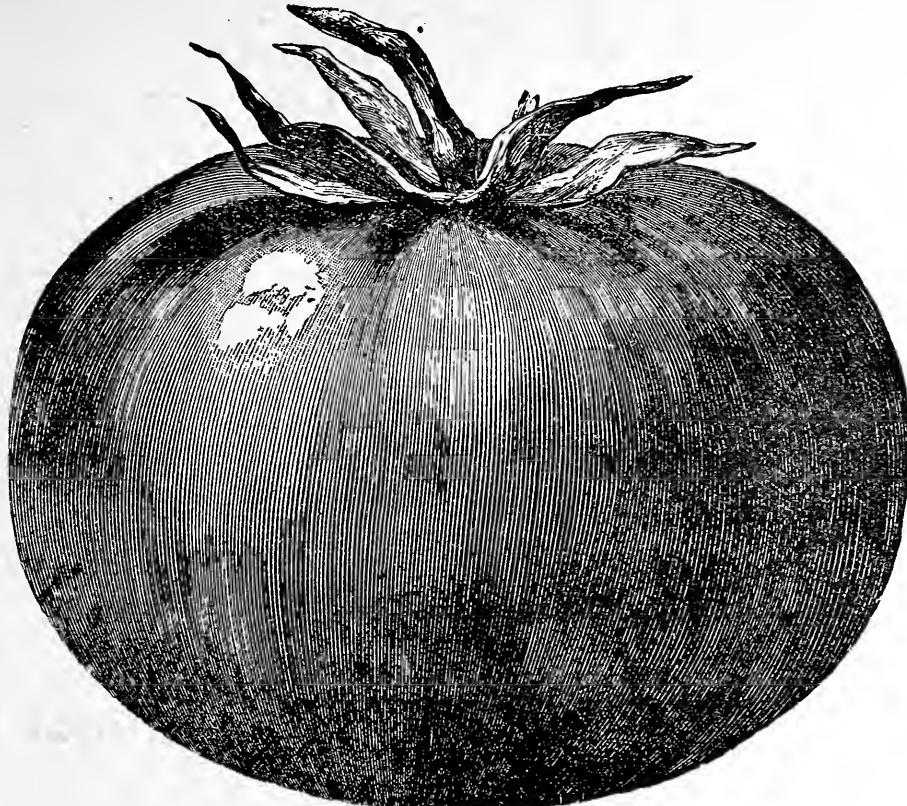
L. W. DINWIDDIE, California.

The Boulder We have named this the Boulder because it is solid and smooth as the Stone Tomato, but so much larger. It is very prolific. See the picture of a cluster taken from our field. It is too large for the shipper, but every housewife wants a large smooth mild tomato for salad. We recommend it to canners. (Pkt. 10c) (oz. 65c) ($\frac{1}{4}$ lb. \$2.00) (lb. \$6.50) postpaid.

Yellow Pear For pickling and preserving. (Pkt. 10c) (oz. 75c) postpaid.

Ground Cherry Grows like a tomato; fruits like a tomato, but the small fruit is enveloped with a husk. It is good for preserves. (Pkt. 10c) (oz. 75c) postpaid.

Genuine Italian Red Pear Shaped Used largely for making puree, preserving and spicing. (Pkt. 10c) (oz. 75c) postpaid.



A & M Improved Stone

A & M IMPROVED STONE**The Most Popular Tomato**

FOR MARKET NEAR AND FAR—THE TOMATO FOR SHIPPING AND CANNING

A & M Improved Stone This is the most popular tomato in Southern California. Several thousand acres are planted to this variety exclusively for shipping to Eastern points after other tomatoes have been destroyed by frost. For this purpose the seed is planted about June 15th, and the tomato brought to full size about October 1st, after which it gradually ripens as wanted for shipping. The tomato is of good size, bright red, solid, smooth, and enormously productive.

The canners prefer it because of its uniformly desirable size and solidity for canning. The grower prefers it because of the vigorous growth and large production extending throughout the season far into the winter months. (Pkt. 10c) (oz. 40c) ($\frac{1}{4}$ lb. \$1.35) (lb. \$4.00) postpaid.

Why do we offer so many varieties of Tomatoes?

Because each variety fills a particular place in the economic life of the nation. Note below the fine, yet important distinguishing features of each variety.

A & M First Early It reaches the early market in better condition and in greater quantities.

Earliana Is similar to the First Early, preferred by many because of local soil conditions.

Bonnie Best Is very prolific, a good hot house variety.

John Baer A fine half early sort, with scant foliage, requires partial shade and heavy soil.

Chalks Early Jewel Many growers fancy it for near-markets. Its fine flavor recommends it to home garden use, but it is too perishable to ship.

A & M Globe For long distance shipping it has no equal.

The Early Shipper Is preferred by many growers who will have no other. It may well rank next to First Early.

Ponderosa A very large pink tomato of delightful mild flavor is excellent for salads, and a favorite home garden variety.

Dwarf Ponderosa Of recent introduction and will find a place in small gardens where space is a large factor. Recommended for home gardens where the soil is sandy and in extreme sunshine.

Golden Ponderosa A large yellow tomato recommended for salads and preserves.

The Home A rank growing vine recommended for the home garden where it may grow on a trellis or where shade or a screen is desired. It will climb 12 feet high, spread as wide and yield enormously, early and late.

Greater Baltimore Similar to A & M Stone, preferred by many who grow for canners.

Dwarf Stone Recommended for home gardens in hot localities, because of its dense foliage. It is a fine large tomato.

NORTON—A Wilt Resisting Variety

Norton The Department of Agriculture has endeavored to find a variety of tomato that would be immune to wilt. No variety has been discovered to be immune, but the Norton proved to be very resistant and because of this and of the fact that it is a practical all round tomato like the Stone which it resembles in every particular. We therefore recommend it to growers who have heretofore suffered from the ravages of tomato wilt. (Pkt 10c) (oz. 40c) ($\frac{1}{4}$ lb. \$1.35) (lb. \$4.00)

A Demonstration

Last summer the college of Agriculture conducted a demonstration plot of tomatoes in San Fernando Valley. Along with a large number of varieties were several of the wilt resistant strains, among them the Norton. All were planted in wilt infested soil. The Norton came through the best of all. Many varieties died, a few survived, but the Norton proved worthy of the title, "A Wilt-Resistant Tomato."

San Jose Canner Its only merit is its enormous tonnage per acre.

A & M Improved Stone The most popular and best all round tomato, particularly good for canning, and is the best fall shipping variety.

Boulder An enormously large smooth tomato. A prize winner.

June Pink Like A & M First Early. Its pink color is popular in the Southern States.

Dwarf Champion Like Dwarf Stone is recommended for hot climates, is pink in color and like June Pink is popular in the South.

Norton Similar to Stone but more wilt resistant.

Burwood A recent introduction, it is recommended for the home garden and promises to excell other varieties for fancy trade.

Yellow Pear, Red Pear and other small prolific varieties are recommended for pickling and preserving.

So you see each variety has its individual merit not possessed by others.

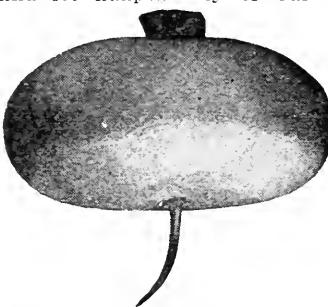
The same is true of peppers, beans, peas and almost every other vegetable and flower. Our descriptions are intended to help you make your selection.

Prunning Vegetable Plants

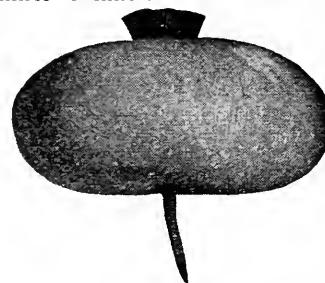
According to the 1922 report of the Research Committee of the Vegetables Growers' Association of America, many experiments have been carried on by experiment stations to determine the effects of removing portions of the plant, such as pruning tomatoes, nipping cucumber and melon vines, removing sweet corn suckers, etc. In general it can be said that the results have been in favor of not disturbing the plants but to let them grow as nature intended they should.

A & M Turnips

Culture—Turnips may be sown broadcast on damp sandy soil or in drills as beets and carrots. Drill in double rows on ridges not too thick in the row. The Purple Top Globe variety is now leading in popularity because of its mild flavor and its adaptability to our summer climate.



Purple Top Strapleaf

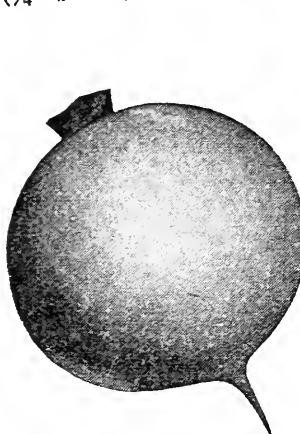


White Flat Dutch

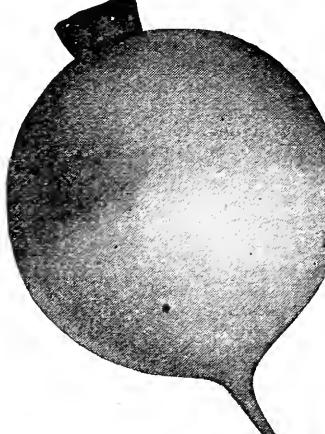
Early Purple Top Strap-Leaf A very popular variety for either family or market use; large size, white, purple above ground; table variety. (Pkt. 10c) (oz. 20c) (1/4 lb. 40c) (lb. \$1.25) postpaid.
Golden Ball A rapid grower of excellent flavor; bright yellow color; good keeper and a superior table variety. (Pkt. 10c) (oz. 20c) (1/4 lb. 40c) (lb. \$1.25) postpaid.

Early White Flat Dutch An early white-fleshed strap-leaved variety; for quick growth, mild flavor and excellent quality. (Pkt. 10c) (oz. 20c) (1/4 lb. 40c) (lb. \$1.25) postpaid.

Purple Top Globe Solid, very sweet, slow to get pithy. The very best variety for the summer season. Indeed, the best for any season, but slower to mature than the Strap-Leaf. (Pkt. 10c) (oz. 20c) (1/4 lb. 40c) (lb. \$1.25) postpaid.



Snowball



Purple Top Globe

Snowball Next to the Purple-Top Globe in popularity, but preferred by many because of its beauty and excellent flavor. It is slow to get pithy in the summer, but always crisp during the winter. (Pkt. 10c) (oz. 20c) (1/4 lb. 40c) (lb. \$1.25) postpaid.

Purple-Top Rutabaga The best of the Swede Turnips. Very hardy and productive; flesh yellow, is very solid, sweet and well flavored. (Pkt. 10c) (oz. 20c) (1/4 lb. 40c) (lb. \$1.25) postpaid.

It is not generally known that Turnips may be planted thickly, then may be thinned one plant to every three inches. The long tender leaves, cooked as mustard or collards, are even better than mustard.

UDO (Japanese Salad Plant)—Three years ago the Department of Agriculture, Washington, D. C., sent us some seed of Udo which we planted in our demonstration garden. Each year it grew taller; the last season it grew 12 feet tall and matured a quantity of seed. The culture is the same as for Asparagus but, like Whitloof Chicory or Celery, it should be blanched by throwing the earth over the growing plants. It may be cooked and served like Asparagus or sliced and served with dressing as a salad. (Pkt. 10c) postpaid.

Three Most Valuable Books for California

By Edward J. Wickson, A. M.

Formerly Emeritus Professor of Horticulture in the University of California; Editor of the Pacific Rural Press
The California Fruits and How to Grow Them
Ninth Edition, 1921—Price \$4.00; postpaid \$4.15
The California Vegetables in Garden and Field

Price \$2.00; postpaid \$2.15

California Garden-Flowers, Shrubs, Trees and Vines

Price \$1.50; postpaid \$1.70

These three books are standard and authentic works on these subjects of fruit growing, vegetable raising and general flower gardening about the home. Written by one who knows California conditions thoroughly.

Read This—Grow your own Vegetables

The decision of the United States Supreme Court, declaring the constitutionality of the California Alien Laws, means very much. Much more to every household than is now discernable. It would be wise to anticipate a scarcity of vegetables until gardening has been readjusted to new conditions. Prices must necessarily be very high and an actual scarcity is inevitable. Not next year but immediately.

If you had visited the several large market places last summer, you would have noticed the preponderance of alien growers supplying much more than one half of all the vegetables.

With this supply eliminated can you doubt there must be a scarcity.

If you would be wise anticipate this scarcity by growing your own vegetables in your home garden.

This scarcity must be felt in every large city throughout the United States. We quote an editorial in the Los Angeles Times, September 11, 1923. "Last year the railroads handled 167,867 cars of our California perishables."

Cabbage, Cauliflower, Lettuce, Muskmelons, Onions and Celery accounted for no small number of car loads, and much of it grown by Aliens, enough of it to cause a serious scarcity on the eastern market.

A Wonderful Opportunity

This situation opens a wonderful opportunity to both the little lander and to the man with large acreage. Anyone having good land with water will find it very profitable to grow vegetables, (1) Because of the scarcity with necessarily higher prices, (2) Because it is reasonable to suppose these skilled aliens will be available for labor.

Agricultural Books

	Price	Pstd.
Cabbage and Cauliflower, by Allen	\$.75	\$.85
California Fruit and How to Grow It, by Wickson	4.00	4.15
California Vegetables, by Wickson	2.00	2.25
California Garden Flowers, Shrubs, Trees and Vines	1.50	1.70
Second 1000 Questions in California Agriculture Answered by Wickson	1.50	1.70
Campbell's Soil Culture Manual, 350 pages	2.50	2.75
Campbell's Soil Culture Primer, 100 pages	.50	.60
Celery Culture, by Beattie	.75	.85
The Corn Crop, by E. G. Montgomery		2.25
Farm Grasses of the United States, by Spillman	1.60	1.75
Forage Crops Other Than Grasses, by Shaw	1.60	1.75
Wild Flowers of California, by P. B. Kennedy	1.50	1.70
Ginseng, Kain's Book on	.75	.85
Grasses and How to Grow Them	2.00	2.10
Insects and Insecticides, by Weed	1.60	1.75
Irrigation for the Farm, Garden and Orchard, by Stewart	1.50	1.70
Mushroom Culture, by American Spawn Co.	.35	.40
Manual of Tropical and Sub-Tropical Plants, by Popeno	5.00	5.20
New Onion Culture, by Grenier	.75	.85
Peanut Culture	.75	.85
Potatoes, by Frazier	1.00	1.15
Pruning Manual, by Bailey	2.00	2.20
Roeding's Fruit Grower's Guide	1.50	1.65
Soils and Fertilizers (Illustrated), by Lyon	1.50	1.65
Spraying Crops, by Weed	.75	.85
Strawberry Culture, by A. S. Fuller	.40	.50
Sweet Potato Culture, by Fitz	.75	.85
Talks on Manures, O. by J. Harris	1.75	1.90
Tomato Culture, by Tracy	.75	.85

Look over the list of Agricultural books and send for the one that may aid you in your particular line.

Read This

Now Mr. Gardner, Los Angeles and Orange Counties have passed the peak of vegetable production. You have been crowded out by oil, and big industries made possible by oil. Your lands have been subdivided to make homes for the people brought here to handle these industries. Instead of planting a large acreage to crops for the shipper for eastern consumption, the east has come here to consume all you can grow in your smaller acreage. Never was there such an opportunity for the small gardener who will specialize and cater to his nearby and most convenient market.

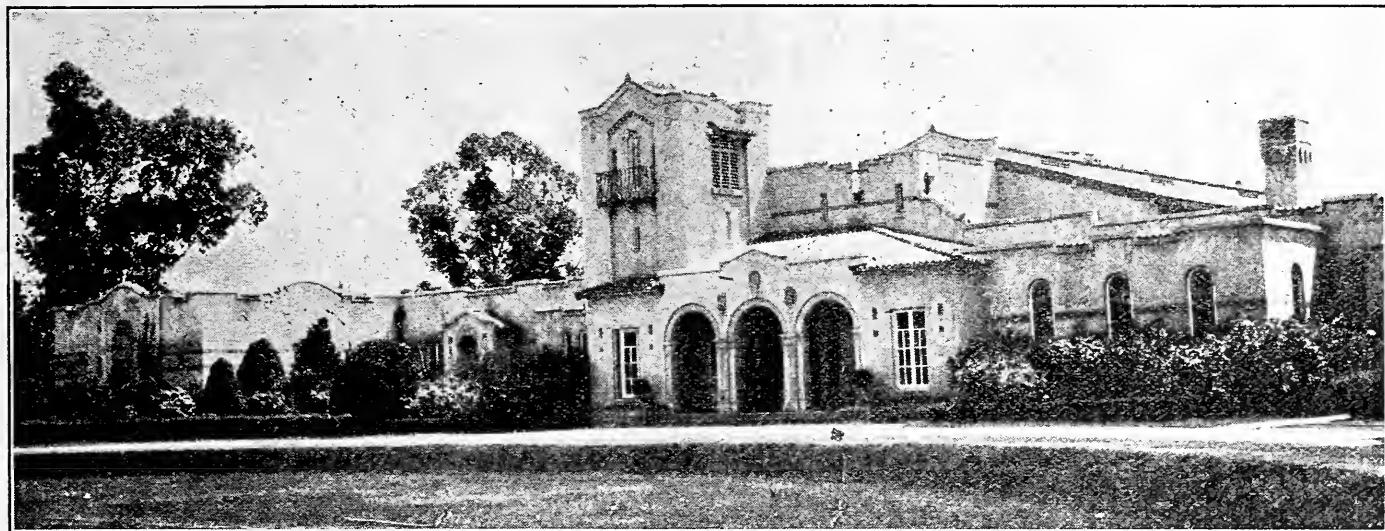
What you grow must be determined by the nature of the soil you have and by the market for which you are growing. Whatever you grow let it be the best. Then you will have no trouble to find a buyer. We suggest that you contract with one or more cafeteries, hotels, clubs or grocers to furnish throughout the season a certain variety of vegetable, like the salad cucumber, then deliver only the best. Set a standard of quality and let your name be the trade mark. Surely now is the opportunity for the small gardens close in. But the large gardener who will continue to grow for the shipper for eastern trade must move out.

The auto truck and increased railway facilities have made it possible for you to do your gardening further up and down the coast, in Imperial Valley, Palo Verde, Sacramento and San Joaquin Valleys. Even now much gardening is done in Arizona and Southern Nevada.

There is no scarcity of good land but Mr. Gardener you must move out. Yet bear in mind that A & M Seeds did much toward building up this tremendous market. Be sure that you continue to plant A & M Seeds.

A & M LAWN GRASS

The beautiful lawns of Southern California cannot be excelled anywhere in the world. In few places can a new home become so quickly surrounded with luxuriant vines, trees, shrubbery and flowers. This climate will accomplish more in one season than five seasons of Eastern climate. It is a pleasure to plant here, for there is something blooming all the year round. But it requires skill and intelligent aid to direct nature to produce a profusion of beautiful colors at all times.



The School at La Habra, California. Our Velvet Lawn Grass in the Foreground.

HOW TO MAKE A LAWN

ASK FOR OUR FREE BOOKLET

Soak the soil thoroughly to germinate all surface weed seeds. If a new home is being constructed, water ground freely while the house is under construction and keep the weeds pulled. This is very important for weed seeds are always present in the soil and if they are not germinated and pulled out before seeding the lawn they will give trouble later. The soil should be made mellow for a depth of 5 inches or more; deep cultivation allows deep rooting and this prevents the lawn being burned out under hot summer sun. The surface should be made perfectly smooth and level if possible, the top surface soil should be raked very fine and then rolled with a light roller. Stir surface very lightly with a light rake and sow seed with care, being sure all ground is covered light with seed then roll again. We do not advise raking in before the last rolling as seed is often thus covered too deep or bunched in places. If one desires, a light mulch of A & M Humus, pulverized manure or sand may be placed on the top after final rolling. Do not put any shavings on lawn. The first sprinkling after seeding is very important. Use a nozzle and apply a very light or fog spray until the surface is thoroughly soaked and the top soil set. Sprinkle twice daily in this manner until the green begins to show and then as often as is necessary to keep the soil in proper growing condition. Do not turn a stream on seed bed or wash sidewalks as this will wash seed especially away from edge of walk. Plant the A & M Velvet Lawn Grass at the rate of one pound of seed to 200 square feet of lawn. These few and simple rules if followed will give you a quick growing and satisfactory lawn.

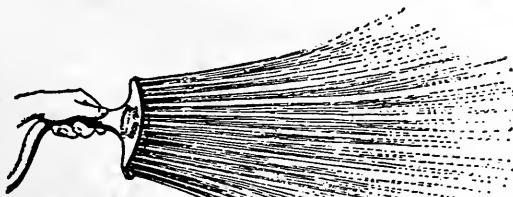
Worthington
"Lawn Cleaner Rake"
"Something New in Rakes"



This rake is made to clean lawns of Bermuda Grass, Burr Clover, weeds, etc. Is made of steel and iron throughout and will withstand the heaviest kind of work.

Price \$3.00 f. o. b. here.

Havil Lawn Weeder
60c postpaid



The Ross Sprinkler 85c postpaid

A & M VELVET LAWN GRASS

The perfect lawn is only obtained by sowing a blend of several varieties suited to conditions and climate. The most beautiful lawns in California are made with A & M Velvet Lawn Grass. This well known Lawn Grass is blended to produce a closely interwoven velvety turf of fine bladed dwarf grasses. When seeded and watered properly it will be ready for cutting the first time in about twenty days from seeding and the tiny plants will immediately stool to a heavy turf of a bright velvety green. A & M Velvet Lawn Grass was blended by us after years of study and close observation of root growth and turf in our trial plots. It is particularly adapted to climatic conditions similar to California and the southwestern states except the extremely warm interior valleys.

(Per lb. 90c, 5 lbs. \$4.25, 10 lbs. \$8.00.)

Interior Valley Lawns

For Imperial Valley and similar climates we recommend Bermuda Grass for the summer lawn and A & M Australian Rye Grass for October planting. After the Bermuda sod is established it may be raked and trimmed closely or the entire surface shaved off with a sharp hoe, after which A & M Australian Rye Grass should be seeded at the rate of 2 lbs. to 10x10 feet and covered with a light mulch of well rotted manure. The Rye Grass provides a green winter lawn which is replaced by the Bermuda sod as summer approaches, Bermuda being the only satisfactory lawn grass which will withstand the excessive summer heat.

Fancy Kentucky Blue Grass The purest and best lawn seed. Produces a lasting and beautiful effect. We sell only the finest quality of this seed. (lb. 70c) (5 lbs. \$3.00) postpaid. Write for price on quantity.

White Dutch Clover Makes a showy effect much quicker than the Blue Grass. In conjunction with the Blue Grass, however, it forms the finest and closest turf. (lb. \$1.10) (5 lbs. \$5.00) postpaid. Write for price on quantity.

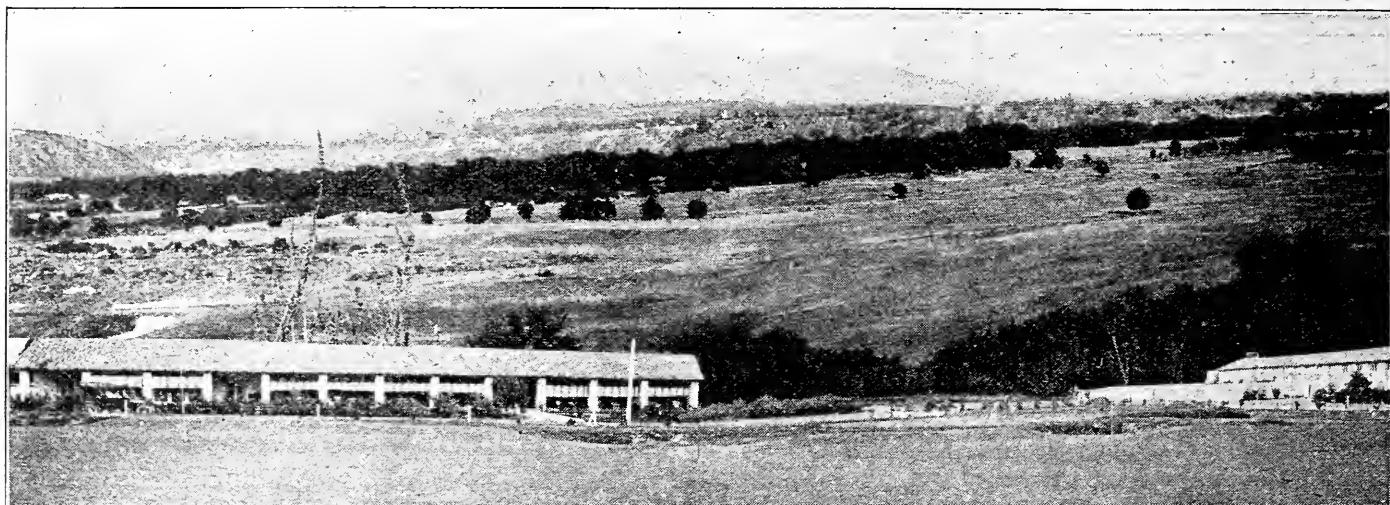
A & M Shady Lawn Grass

In many lawns there are shaded spots which are difficult to get sodded. To overcome this difficulty we blended a combination of fine dwarf growing evergreen varieties which in their wild or natural state are found growing in shady nooks or in the woods. This blend has been in use in California for a number of years and the demand for it has increased steadily among landscape gardeners who know the value of it. Sold in any quantity for the small lawn or the large private estates or parks. (Lb. 75c, 5 lbs. \$3.50, 10 lbs. \$6.50 f. o. b. here)



A & M Velvet at the Junction Oil Station

Grass Mixtures for Polo and Golf Links



Looking East Over the Flint Ridge Club House Down to the Arroyo Links.

Lying west of the house are several hundred acres of woodland and meadow, also devoted to golf.

Australian Rye A very desirable perennial grass generally preferred for fairways. Ask for price.

Pacific Rye Similar to the Australian and used for the same purpose. It is somewhat coarser and more hardy. Ask for price.

Red Top A very fine bladed grass, quick to establish itself and on that account it is extensively used with the first planting together with other grasses in order to have a dense turf as quickly as possible. It is unfortunate that the life of Red Top scarcely endures to the second year. Ask for price.

Bermuda Grass Undoubtedly the best of all for endurance for which reason it is used on all polo grounds and on many fairways. Its natural tendency to become dormant during the winter months discourages planting. Also its tendency to mat when an excessive amount of water is applied is a drawback to a more general use. Notwithstanding these drawbacks, it is the best grass known for endurance. Ask for price.



A Load of Blue Grass en Route to Elsinore for the Southern California Athletic and Country Club

Chewings Fescue In Southern California this variety together with Red Top is used more extensively for putting greens. It is very finely bladed and makes a beautiful and lasting green. We give it special recommendation for shady places. Ask for price.

Sheeps Fescue Similar in appearance to Chewings Fescue but more bunching. It is very desirable for planting in the rough. Ask for price.

For Seeders, See Farm Requisites

Lawn Rollers

The new water ballast lawn roller may be filled with water to any desired weight. 350 lb. and 500 lb. sizes. Ask for prices.

Straight or Mixed Grasses for the Greens and Fairways

We have always advised sowing grasses separately, rather than mixtures. When you buy them separately you get a minimum of foreign seeds and no chaff. On account of the different weight and sizes of seeds, a good job of sowing cannot be made with mixtures.

Our advice is corroborated by many green-keepers. Our Blue Grass is recleaned at our own mill.

No two green-keepers hold fast to the same varieties of grasses. This is because of the difference in the nature of the soil, but it is conceded that Blue Grass is the best main crop. The greatest demand next to Blue Grass is for Australian Rye, Sheeps Fescue, Chewings Fescue, Red Top and Bermuda Grass. We specialize in these varieties and have the best.

Some other varieties are recommended, if any of you desire these varieties, ask for price.

We specialize in all requisites for the golf course. We have everything the Greens-Keeper needs.

Our salesman will call upon you, but do not hesitate to telephone us should you wish to see him between calls.

Our grass seed is tested in our own Laboratory (see page 8) for purity and germination. When there is need for it, the seed is recleaned at our own mill. Our cleaning facilities are the best obtainable. When you buy your grass seed from us, you get clean seed of high germination.

Ammonia Sulphate for Golf Courses

A complete fertilizer to be applied once a year on putting greens is—

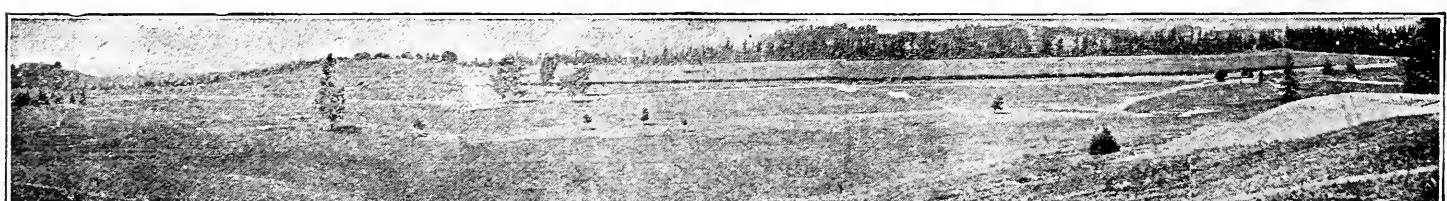
Ammonia sulphate 250 lbs.

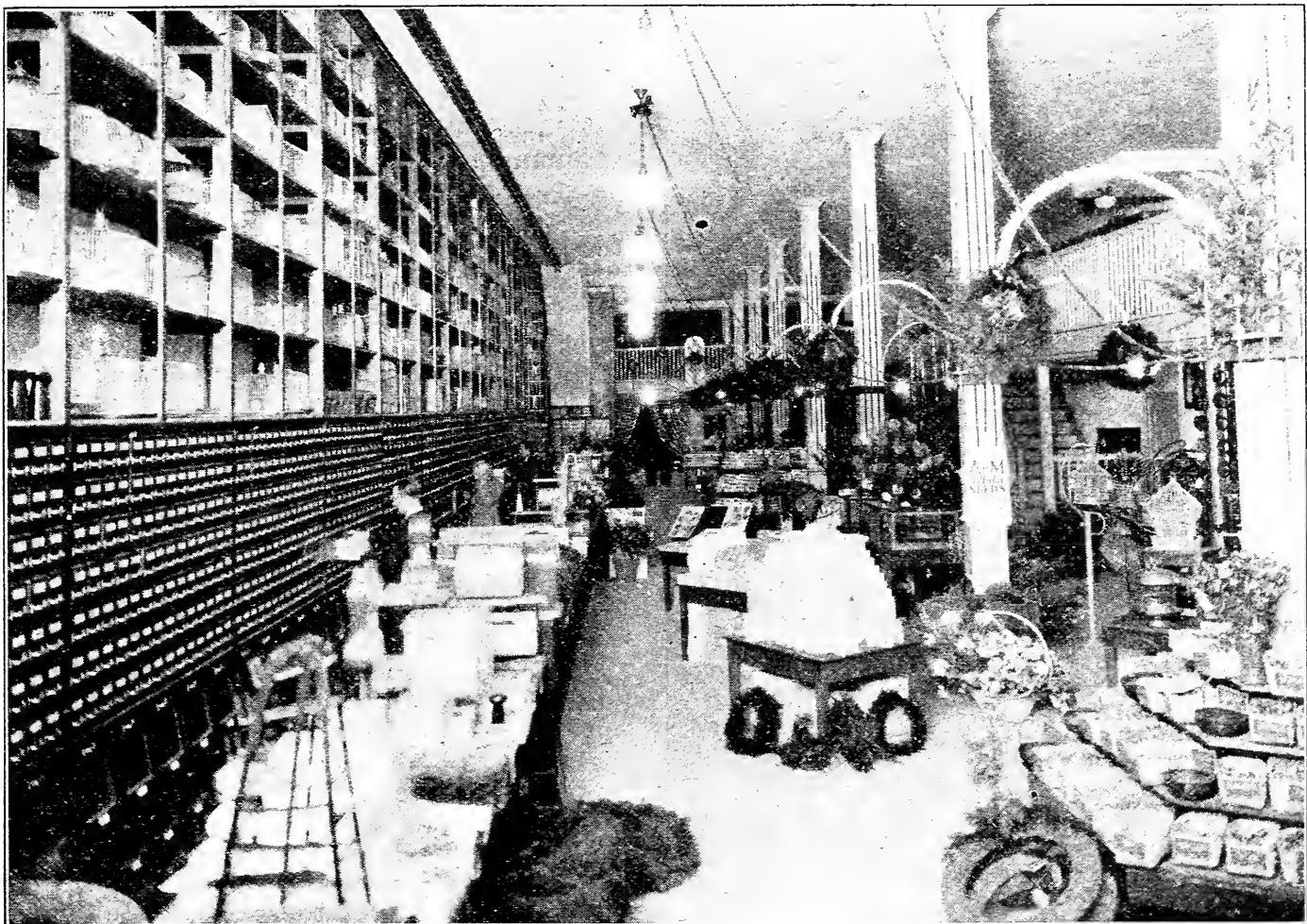
Bone Meal 500 lbs.

Muriate of Potash 100 lbs.

Mix thoroughly and apply at the rate of 20 lbs. to 1,000 sq. ft.

See our Lawn Sprinklers.



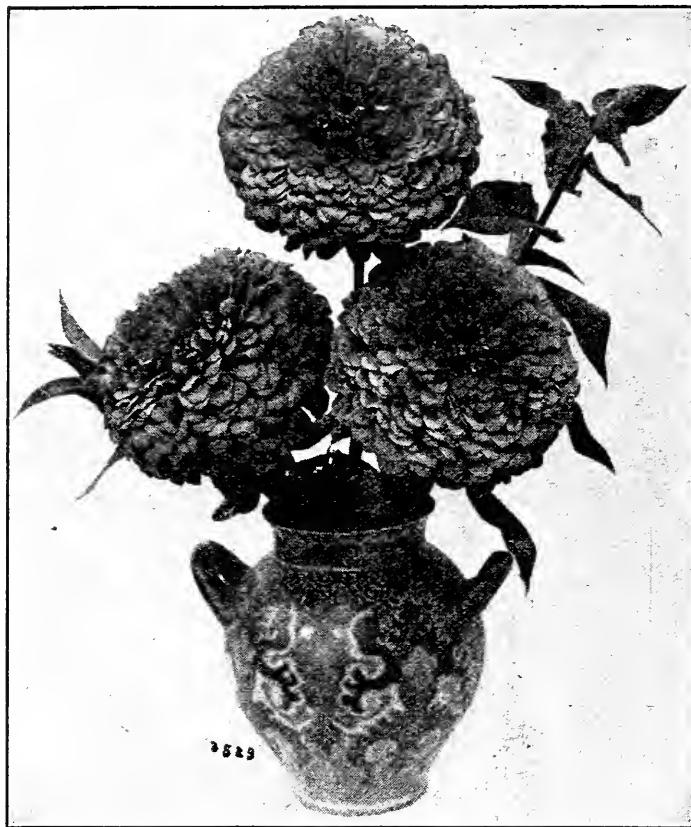


An Interior View of Our Store at 750 South Spring St.



Plant Department in Our Store at 750 South Spring St.

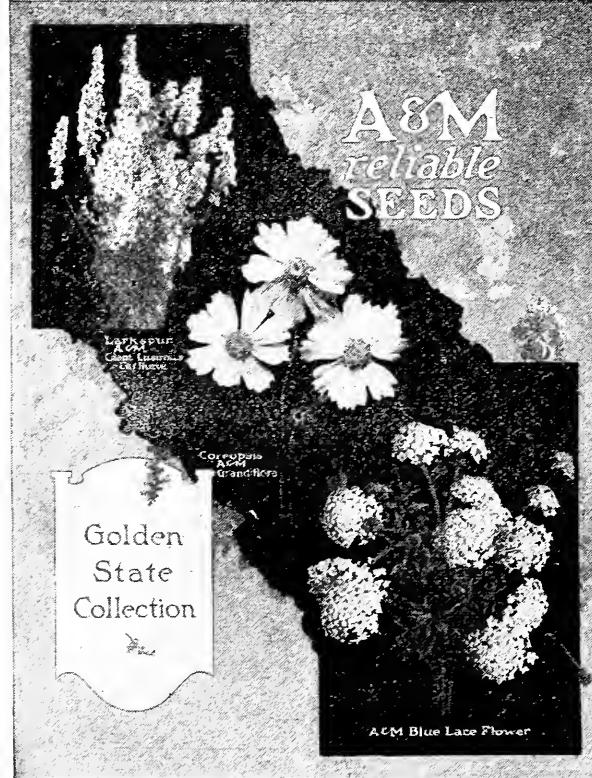
A & M Dahlia Flowered Zinnias



A & M Dahlia Flowered Zinnia

They are of easy culture and will make a gorgeous garden display. **Pkt. 35c.**

Dahlia Flowered Zinnia Collections—One packet each of Golden State, Exquisite Pink and Crimson Monarch, \$1.25. With Special Mixture included, \$1.50.



Golden State Collection

This wonderful collection of improved large flowering annuals will please you.

For a striking show in the garden and for cutting purposes this collection of pretty and easily grown flowers will be found very satisfactory.

Plant them in the open ground during the spring season and you will be rewarded with a most wonderful display of blooms with a wide range of color. The flowers included in the Golden State Collection lend themselves to many uses. They may be planted among shrubs, in open beds or used as border beds, all with artistic results.

The Golden State Collection consists of:—

- 1 Pkt. Larkspur—A & M Giant Lustrous carmine.
- 1 " Coreopsis—A & M Grandiflora.
- 1 " A & M Blue Lace Flower.
- 1 " Zinnia—A & M Dahlia Flowered.

50c. Postpaid.

Classification of Flower Seeds for Special Purposes

This page is intended to aid you in the selection of your seeds that you may have flowers all the year round, and for every purpose.

FLOWERING ANNUALS, ALSO SOME PERENNIALS WHICH FLOWER FIRST SEASON FROM SEED

Varieties	Marked *	Are Best for Beds and Masses
Abronia	*Chrysanthemum	Ice Plant
Acroclinium	mum	Kochia
*African Daisy	(Annual)	*Larkspur
*Ageratum	Cineraria	Lavatera
*Alyssum	Clarkia	Linum
*Antirrhinum	Convolvulus	Lobelia
Arctotis	Cosmos	Lupinus
*Asters	Dahlia	Marigold
Balsam	Datura	Marvel of
*Bartonia	*Dianthus	Peru
Begonia	Dimorphotheca	Matricaria
Bellis	*Eschscholtzia	Matthiola
Brachycome	*Gaillardia	Mignonette
*Calendula	Geranium	Mimulus
*Calliopsis	*Godetia	Mirabilis
*Candytuft	Gomphrena	Myosotis
Canna	Gypsophila	Nasturtium
Carnation	Helianthus	Nemesia
*Celosia	Helichrysum	Nemophila
Centaurea	Hollyhock	Nicotiana
	(Annual)	Nigella
	Hunnemannia	Oenothera

FLOWERING PERENNIALS

For Permanent Beds and Borders, Many Flowering
the First Season

Agathaea	Chrysanthemum	Gypsophila	Pyrethrum
Anchusa	Coreopsis	Heliotrope	Ricinus
Anemone	Cyclamen	Hollyhock	Romneya
Antirrhinum	Daisy	Hunnemannia	Salvia
Aconitum	Dahlia	Lantana	Scabiosa
Aquilegia	Delphinium	Lobelia	Shasta Daisy
Begonia	Dianthus	Lupinus	Statice
Bellis	Digitalis	Mimulus	Stevia
Canterbury	(Foxglove)	Myosotis	Stocks
Bells	For-Get-Me-Not	Pansy	Snapdragon
Campanula	Freesia	Pentstemon	Sweet William
Canna	Gaillardia	Petunia	Valeriana
Carnation	Geranium	Phlox	Verbena
Centaurea	Gerbera	Poppy	Vinca
Candidissima	Geum	Primula	Viola

FOR SHADY PLACES

Anemone	Bellis	Scarlet Flax	Pansy
Antirrhinum	Daisy	Foxglove	Primula
Aquilegia	Clarkia	Godetia	Viola
Begonia	Cineraria	Mimulus	Violets
(Tuberous)	Cyclamen	Myosotis	Ferns
	Delphinium	Oenothera	

FOR CUT FLOWERS

Acroclinium	Calliopsis	Gerbera	Salpiglossis
Antirrhinum	Celosia	Gypsophila	Salvia
Aquilegia	Centaurea	Hunnemannia	Scabiosa
Asters	Chrysanthemum	Larkspur	Schizanthus
Candytuft	Coreopsis	Lupinus	Statice
Carnation	Cosmos	Marigold	Stevia
Arctotis	Dahlia	Matricaria	Stocks
Bartonia	Daisies	Mignonette	Sunflower
Brachycome	Delphinium	Pentstemon	Sweet Peas
Calendula	Dianthus	Poppies	Zinnias
	Gaillardia	Pyrethrum	

ORNAMENTAL AND FOLIAGE PLANTS

Amaranthus	Centaurea	Coleus	Pyrethrum
Canna	Candidissima	Kochia	Ricinus

FRAGRANT FLOWERS

Abronia	Mimulus
Alyssum	Nicotiana Affinis
Centaurea	Pansy
Carnation	Scabiosa
Clematis	Paniculata Stocks
Cyclamen	Sweet Peas
Dianthus	Sweet William
Heliotrope	Violet
Mathiola	Wallflower
Mignonette	

EVERLASTING FLOWERS

Ammobium	Helichrysum
Acroclinium	Ornamental Grasses
Gomphrena	Rhodanthe
(Globe Amaranth)	Statice
Gypsophila	Xeranthemum
Paniculata	

FOR HANGING BASKETS, WINDOW BOXES, etc.

Drooping	Upright
Alyssum	Coleus
Asparagus Sprengeri	Geranium
Convolvulus	Vinca Rosea
Kenilworth Ivy	Pansy
Lobelia	Viola
Nasturtium	Begonia
Petunia	Ageratum
Smilax	Heliotrope
Thunbergia	Primulas
	Candytuft

FOR EDGING AND BORDERS

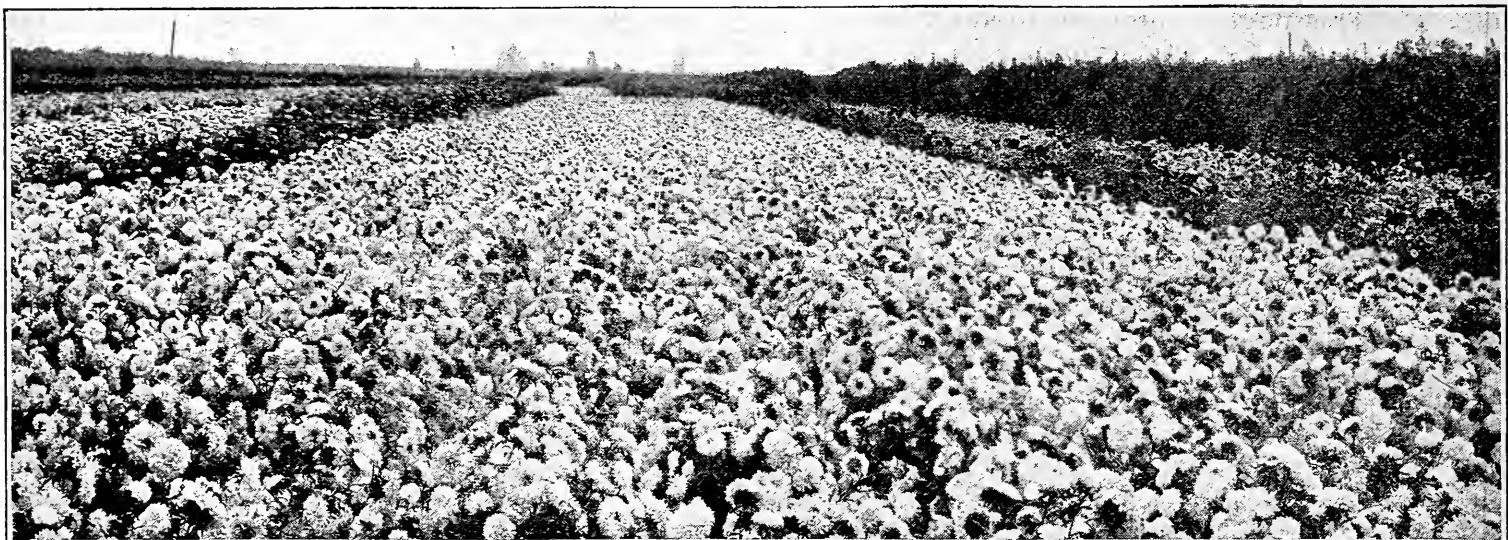
Ageratum	Lobelia
Alyssum	Marigold (Dwarf)
Asters (Dwarf)	Myosotis
Begonia	Nasturtium
Bellis	Nemophila
Candytuft	Pansy
Centaurea	Phlox Drummondi
Candidissima	Petuna Nana Erecta
Coleus	Pyrethrum
Dianthus	Shasta Daisy
Dimorphotheca	Sweet Peas Cupid
Gomphrena	Viola
Kochia	Zinnia (Dwarf)

CLIMBING VINES

Annual	Perennial
Balloon Vine	Ampelopsis
Balsam Apple	Antigonon (Bulbs)
Balsam Pear	Asparagus
Canary Bird Vine	Australian Pea Vine
Cardinal Climber	Clematis
Convolvulus	Cobaea Scandens
Cypress Vine	Ipomoea
Japanese Hop	Lathyrus
Hyacinth Bean	Moon Vine
Ipomoea	Mandevillea
Japanese Morning Glory	Mina Lobata
Mina Lobata	Passiflora
Nasturtium	Smilax
Scarlet Runner	Maderia Vine
Sweet Peas	(Bulbs)
Thunbergia	Wisteria
Wild Cucumber	Cinnamon Vine (Bulbs)

FLOWER SEEDS

SEE INSIDE BACK COVER FOR PLANTING CALENDAR



A Seed Field of A & M Asters

Tender or Greenhouse means the plant will not stand the least frost. All such must be planted late in spring (May) or in a greenhouse.

Half Hardy means the plant will stand any light frost, but needs protection against very cold weather. These should be planted in the spring (March and April), not in the fall.

Hardy means the plant will stand considerable frost, or practically all we have on the Pacific Coast. These may be planted in the fall or in the spring (October to May). If sown in the fall they will come into bloom earlier than if sown in spring, even if the plants do not make much progress during the cold weather.

Annuals are plants that bloom in the first year from seed,

and the plant dies after one season. Tender annuals must be sown in spring (April to June) and hardy annuals may be sown in either spring or fall (October to May).

Biennials are plants that bloom the second year from seed, and plant dies after blooming. In California many of these will bloom the first year if sown early. Sow under same conditions as perennials.

Perennials are plants that bloom the second year from seed, and the plant lives and blooms during successive years. If sown in early spring (February to April 15) many perennials will bloom the first year from seed. Tender and half-hardy perennials are best sown in spring after frost is over (April 15 to June). Hardy perennials are best sown in late summer and early fall (July to October) for next year's flowers.

ABRONIA (Sand Verbena)

A hardy annual, trailing in habit, about nine inches high, bearing verbena-like clusters of flowers, which are very fragrant. A native of California. Thrives in dry situations, and is valuable for rock work or hanging baskets.

Umbellata—Rosy lilac. Pkt. 10c.

ACROCLINIUM

Hardy annual everlasting flowers, white and self pink with golden centers. Should be cut the first day they open.

Double Rosea—Bright pink. Pkt. 10c.
Double Mixed—Pink and white. Pkt. 10c.

AGATHEA

Sometimes referred to as the Blue Marguerite. Plants dwarf and compact, covered throughout a long season with myriads of small Blue Marguerite-like flowers. These are splendid for cutting purposes. Pkt. 10c.

AGERATUM (Floss Flower)

A hardy annual of easy culture, especially valuable for bedding, as it is literally covered with blossoms all summer. Sow the seed early in the spring, either in boxes to transplant, or out of doors, and thin to four to six inches.

Blue Perfection—Deep blue, one foot high. Pkt. 10c.

Dwarf White—One foot high. Pkt. 10c.
Mixed—Pkt. 10c, 1/4 oz. 25c.

ANCHUSA ITALICA

Dropmore Variety—One of the best hardy perennials, growing 3 to 5 ft. high, and having long loose sprays of lovely forget-me-not-like flowers of a rich gentian blue. Is very free flowering, blooming over a long season. Pkt. 10c.

ALYSSUM

A fragrant hardy annual having the odor of honey and bearing spikes of small white flowers in great profusion throughout the winter, spring and summer. Without a doubt the best white border plant, is also useful for beds and baskets and will begin to bloom when quite small.

Carpet of Snow—Very compact, growing about three inches high, one plant often having a diameter of 15 inches. Pkt. 10c, 1/4 oz. 25c.

Little Gem—Grows 4 to 6 inches high. One of the finest for low beds and borders. Pkt. 10c, 1/4 oz. 25c.

Sweet White—The tallest of this group, growing 8 to 12 inches. A profuse bloomer. Pkt. 10c. oz. 30c.

Lilac Queen—A delicate lilac (dwarf). Pkt. 10c, 1/4 oz. 25c.

AQUILEGIA (Columbine)

A hardy perennial of graceful habit growing about two feet high. The flowers are attractive and beautifully adapted for cut flowers. They may be successfully grown in partial shade. Fall sown seed will bloom the following spring. If sown in early spring will often flower the same season.

Canadensis—An improved variety of scarlet and yellow. Pkt. 10c.

Coerulea (Rocky Mountain Blue Columbine)—Fine deep blue and white; long spurs. Pkt. 15c.

Long Spurred Hybrids Mixed—For cut flowers these long spurred hybrids are unexcelled. Profuse blooms, of almost every shade, borne on long graceful stems, make this variety one of universal admiration. Pkt. 15c.

Chrysanthia White Spurred—Pure white with long spurs. Pkt. 15c.

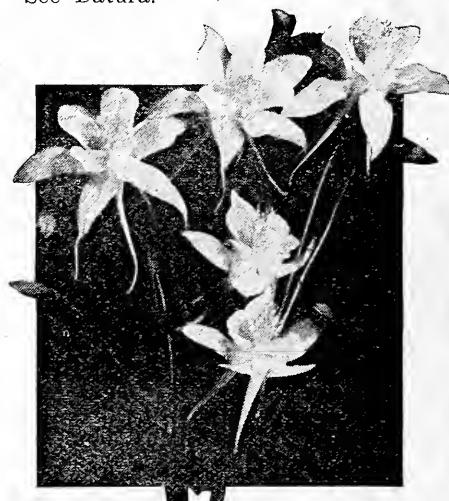
Double Mixed—Pkt. 10c.
Single Mixed—Pkt. 10c.

ANEMONE (Windflower)

Giant French Single Mixed—This lovely flower may be grown from seeds as well as bulbs. Our seed has been saved from an extra fine strain and contains a very choice mixture of colors. The seed may be sown in the fall or spring in the open ground. We suggest that the seed be covered lightly with sand, then spread a thin cloth over the bed and water through this. The plants form bulbs which should be given the culture as recommended in our bulb catalog. Pkt. 25c.

ANGEL'S TRUMPET

See Datura.



Columbine

A & M Snapdragons

Antirrhinum

The Snapdragon is now one of the most popular flowers. It is easily grown from seed and may be sown practically the year round. They may be had in great variety of separate colors or you may plant the mixed for a brilliant array of color. Be sure to include these in your garden.

Tall Large Flowering

This type grows about 3 feet tall, the flowers are large and the flower spikes long. Splendid for cutting and tall borders.

Fire King—A brilliant scarlet orange variety. Pkt. 10c.

Garnet—A velvety, deep red. Pkt. 10c.

Golden King—Long spikes of showy yellow flowers which remain in bloom the whole of the summer. Pkt. 10c.

Rose—Soft rose. Pkt. 10c.

Rose Pink—A delightful shade of pure rose pink. Very vigorous and free-flowering. Pkt. 10c.

Silver Pink—A delicate pink with silver shading. Pkt. 10c.

Venus—Pink with white throat. Pkt. 10c.

White (Queen Victoria)—Striking variety sending up numerous long spikes of pure white flowers. Excellent for cutting. Pkt. 10c.

The above tall varieties are also offered in $\frac{1}{4}$ oz. 35c.

Mixed—Including all the new colors. Pkt. 10c. $\frac{1}{4}$ oz. 25c.

Semi-Dwarf Large Flowering

The best for bedding and because of the large flowered compact spike is considered fine for cutting. Height about 18 inches.

Amber Queen—Amber suffused chamois. Pkt. 10c.

Crimson Queen—A deep velvety crimson. Pkt. 10c.

Defiance—A fiery scarlet. Pkt. 10c.

Diana—Soft rose pink with white tube. Pkt. 10c.

Fascination—A pearly pink. Pkt. 10c.

Golden Queen—A rich clear yellow. Pkt. 10c.

Prima Donna—Terra cotta pink, suffused primrose. Pkt. 10c.

Queen of the North—Pure white. Pkt. 10c.

The above separate colors $\frac{1}{4}$ oz. 45c.

Semi-dwarf Mixed—Pkt. 10c, $\frac{1}{4}$ oz.

35c.

Tom Thumb—An excellent mixture containing all shades of these showy flowers. Splendid for edging and showy display. Height 10 inches.

Mixed—Pkt. 10c.

AMARANTHUS

Hardy annuals, grown especially for their brilliant foliage.

Caudatus (Love Lies Bleeding)—Light yellowish-green foliage; long, drooping crimson flower spikes. Plants grow three feet high. Pkt. 10c.

Sunrise—The most brilliant variety, large bronze red foliage growing on branches from 3 to 6 ft. tall. The foliage at the end turning a brilliant scarlet. Pkt. 15c.

Salicifolius or Willow-leaved—This variety is like the above except that the foliage is fine, giving a drooping, graceful effect. Pkt. 10c.

Tricolor (Joseph's Coat)—The leaves of this variety are green, red and yellow. Pkt. 10c.

AMMOBIUM

Hardy annual everlasting flowers. Pure white and very double. Pkt. 10c.

AMPELOPSIS

Quinquefolia (Virginia Creeper)—A very popular climber. Hardy perennial. Seed may be sown any time of the year. During the summer the foliage is green, changing to various shades of bronzy red during the fall. Pkt. 10c.

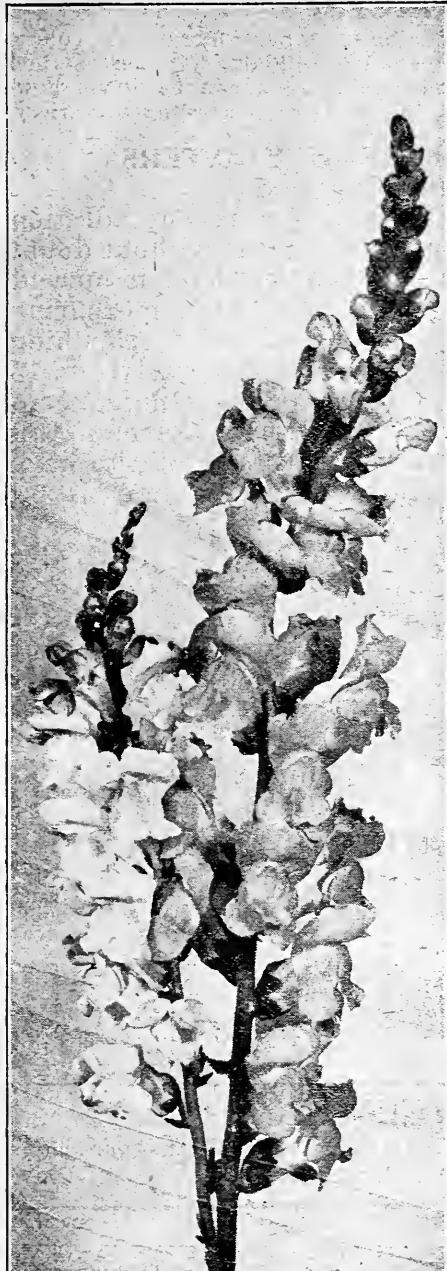
Veitchii (Boston Ivy)—A valuable perennial climber which grows rapidly, clinging to brick and wood. The leaves are deep green, changing to scarlet in the fall. Pkt. 10c.

AUSTRALIAN PEA VINE (*Dolichos Lignosus*)

A rapid growing evergreen climbing perennial, flowering freely in large clusters of rose flowers. For covering arbors, trellises, etc., they have no superior. Pkt. 10c.

AUTUMN GLORY

See Sunflower.



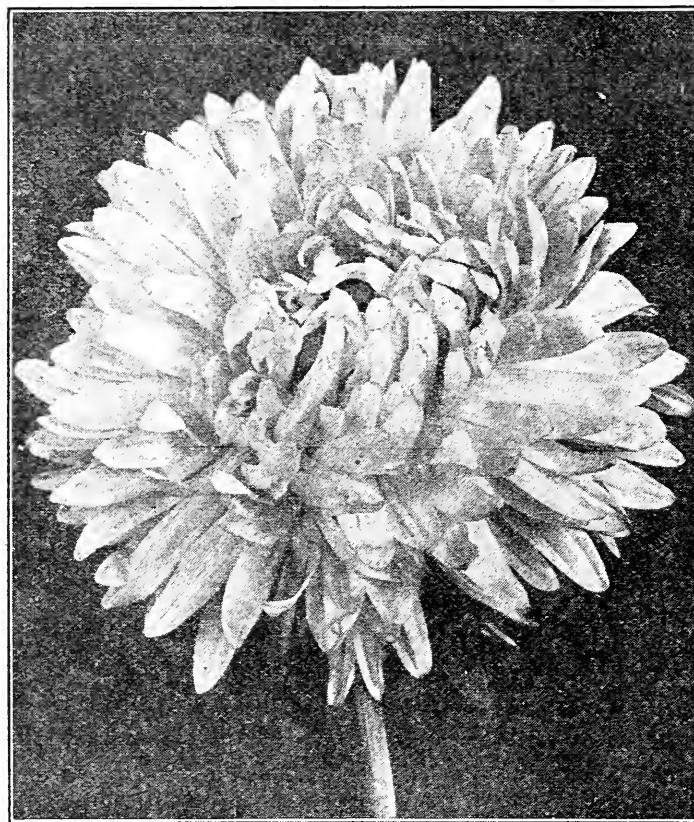
A & M Snapdragon



Arctotis Grandis

A & M California Grown Aster

A popular half-hardy annual produced in a great variety of classes, and an almost endless number of colors. The tallest grow about two feet high, and some varieties of dwarfs are not over eight inches high. The best method of culture is to sow the seed in boxes and transplant when large enough to handle. The seed can be sown, however, in the row where the plants are to remain, thinning them from six to twenty inches apart, according to variety.



Aster—A & M American Beauty

QUEEN OF THE MARKET

(Early Flowering)

One of the earliest blooming varieties, blossoming frequently in July. Of spreading habit, 12 to 15 inches high. Blossoms medium sized, and the petals curve outward. The best early variety for bedding or edging. Pkt. 10c, $\frac{1}{4}$ oz. 35c.

GIANT BRANCHING COMET

(Late Flowering)

The plant grows 24 inches high and about 18 inches in width and the blossoms, which are large and full-petaled, are borne on long stems or branches.

Crimson	Pkt. 10c	Lavender	Pkt. 10c
Rose Pink	Pkt. 10c	Rose	Pkt. 10c
Dark Blue	Pkt. 10c	Royal Purple	Pkt. 10c
Shell Pink	Pkt. 10c	White	Pkt. 10c
Light Blue	Pkt. 10c	Mixed	Pkt. 10c

Separate Colors, $\frac{1}{4}$ oz. 50c. Mixed, $\frac{1}{4}$ oz. 45c.

AMERICAN BRANCHING

(Late Flowering)

An excellent variety, the plants are 2½ to 3 feet high and have a branching and vigorous growth. The flowers are well formed, being large, double and incurved.

Lavender	Pkt. 10c	Black Blue	Pkt. 10c
Purple	Pkt. 10c	Deep Rose	Pkt. 10c
Peerless Pink	Pkt. 10c	Crimson	Pkt. 10c
White	Pkt. 10c		

Separate Colors, Pkt. 10c. $\frac{1}{4}$ oz. 50c; Mixed, Pkt. 10c, $\frac{1}{4}$ oz. 40c.

A & M KING ASTERS

(Late Flowering)

This variety is quite distinct. The flowers are large and very double, the petals being long and narrow and having a quilled appearance. It is a sturdy grower, a free bloomer and the flowers keep longer and ship better than any other variety.

Black Blue, deep purple	Pkt. 10c	Lavender	Pkt. 10c
Crimson	Pkt. 10c	Violet	Pkt. 10c
Deep Flesh	Pkt. 10c	White	Pkt. 10c
Rose	Pkt. 10c	Mixed	Pkt. 10c

AMERICAN BEAUTY ASTERS

(Late Flowering)

This wonderful variety is a recent addition to the popular aster family. It is without doubt one of the grandest. The flowers have in-curved petals and are large and full, often measuring 4 inches across. The plants are of branching habit and the flower stems measure from 15 to 30 inches. The flowers have splendid keeping qualities. We heartily recommend this variety as one which you will be proud to have in your garden. We have a complete list of colors.

Azure Fairy, bright beautiful blue..	Pkt. 25c
Peach Blossom, a pleasing combination of rose and light pink.....	Pkt. 25c
Carmine Rose	Pkt. 25c
Lavender	Pkt. 25c
September Beauty, shell pink.....	Pkt. 25c
Purple	Pkt. 25c
White Beauty	Pkt. 25c
Mixed	Pkt. 25c

OSTRICH FEATHERED ASTERS

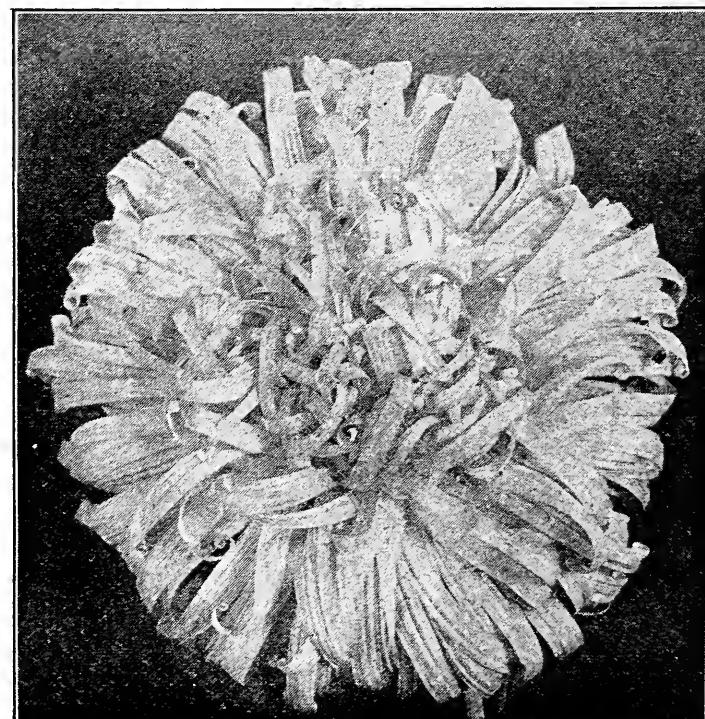
(Mid-Season Flowering)

Extremely graceful Aster, with large, loose, feathery heads, unrivaled for table decoration, flowers double and semi-double. The branching habit makes this a conspicuous border plant. Height 18 inches.

Crimson	Pkt. 10c	Light Blue	Pkt. 10c
Rose Pink	Pkt. 10c	White	Pkt. 10c
Dark Blue	Pkt. 10c	Rose	Pkt. 10c
Shell Pink	Pkt. 10c	Mixed	Pkt. 10c
Separate Colors, $\frac{1}{4}$ oz. 60c. Mixed, $\frac{1}{4}$ oz. 55c.			

COLLECTION

One packet each of Queen of the Market, American Beauty, King and Ostrich Feathered.....50c



Aster—A & M Ostrich Feather

A & M ASTERS—Continued

HEART OF FRANCE

Heart of France—A rich dark red. The richest, most striking color and not to be found in any other aster. The plants grow about 2 feet high and are of a branching habit. Pkt. 25c.

DWARF BOUQUET

A & M Dwarf Bouquet—A compact and free flowering variety which is admirably adapted for edging and carpet bedding. Height 1 ft. All colors mixed. A strain recommended as a border variety, being exceptionally dwarfed. Pkt. 10c.

MIGNON or POMPON

A & M Mignon (Pompon)—One of the daintiest and most attractive varieties of Asters. The bright colored flowers are small, about $\frac{3}{4}$ to 1 inch in diameter and are produced in great profusion. Excellent for cutting and bedding. Mixed, Pkt. 10c.

Lavender—Pkt. 10c.

Rose—Pkt. 10c.

A & M QUILLED

A & M Quilled—An old favorite which has become popular again. The quilled petals give a pompon effect and the

flowers often measure 3 inches across. Its keeping qualities excel all other varieties. A variety which retains its bloom and color beyond the time of other popular sorts. Mixed. Pkt. 10c.

SINGLE ASTERS

A & M Single Asters—Single Asters make splendid bedding, border and cut flowers. They resemble daisies, and in this mixture are shades of pink, blue, lavender, rose. The flowers keep well in water when cut. Mixed. Pkt. 10c.

We also carry the following separate colors:

Scarlet Dark Blue Lavender
Pkt. 10c each.



A & M Balsam

BALSAM (Touch-Me-Not)

A tender annual, with brittle stems and foliage. Flowers both single and double, in bright colors and variations are wax-like and very attractive. The individual blossoms floating in a dish of water exhibit their beauty to the best advantage.

Improved Double Camelia Flowered—In its extraordinary size, perfect form and brilliant colors, this fine strain of balsams surpasses all others. Height 18 inches. Pkt. 10c.

Rose Flowered—Handsome double flowers in form resembling a rose. Height 18 inches, fine mixed. Pkt. 10c.

Spotted—Large semi-double flowers well adapted for borders, fine mixed colors. Pkt. 10c.

BRACHYCOME IBERDIFOLIA (Swan River Daisy)

A charming annual deserving greater popularity. The plants, which grow about 10 inches high, are covered with Cineraria-like blooms in shades of blue and lavender. Mixed—Pkt. 10c.

Send for A & M Fall Bulb Catalog ready about August 15th.

BARTONIA AUREA

A showy California annual. Lovely large golden yellow flowers which glisten like satin in the sunshine. The height is about 18 inches, making them very desirable for bedding and cutting. Pkt. 10c.

BEGONIA SEMPERFLORENS

Very attractive flower for both pot and bedding use and should be more extensively grown for shady borders. Perennial. Pkt. 25c.

A & M DOUBLE DAISY (Bellis Perennis)

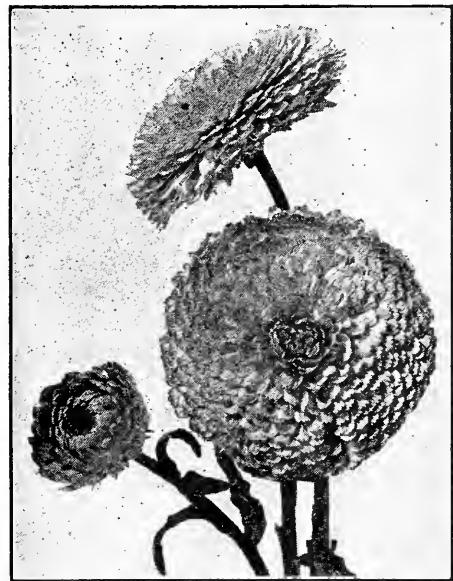
A hardy perennial, blossoming freely all spring and summer. Plant is about four inches high and is valuable for borders.

Extra Double Red—A variety of more recent introduction. Pkt. 15c.

Snowball—A clear, extra double white variety. Pkt. 15c.

Extra Double Pink—A beautiful shade of pink. Pkt. 15c.

Double Mixed—Pkt. 10c.



Calendula—A & M Orange King

BALLOON VINE (Love-in-a-Puff)

Climbing annual, with small flowers. The seed pods are curiously swelled or puffed and are quite attractive. Pkt. 10c.

BALSAM APPLE, BALSAM PEAR (Momordica)

A climbing annual, growing about 10 feet long. Has graceful and ornamental foliage, yellow flowers and warty golden yellow fruit, with large carmine red seeds. Balsam Apple and Balsam Pear are climbers which thrive in hot locations, and are much planted around Bakersfield. Pkt. 10c. each.

CANDYTUFT (Iberis)

A hardy annual, growing about 12 to 18 inches high, according to the variety. The blossoms are borne on umbels, and the newer varieties are quite large flowering and very fragrant. Of easy culture and valuable for bedding or massing. Crimson Pink White Lilac
Flesh Color Rose Cardinal Mixed
Pkt. 10c. Separate colors, oz. 40c. Mixed,
oz. 30c.

Giant White Hyacinth Flowered—A giant Candytuft, bearing immense snowy white spikes, which often measure 10 inches or more. Don't fail to give this a trial. Pkt. 10c.

Coronaria Empress—Large trusses of pure white flowers, one of the finest candytufts yet raised. Pkt. 10c.

A & M CALENDULA

Very hardy annual, one foot high, blooming freely practically the whole year round. It is one of the easiest culture and is desirable for rather inferior soils, where less sturdy flowers do not thrive. Calendulas make one of our finest winter flowers. A hard frost will not hurt them. In fact, the flowers are larger and finer during the winter and spring months.

Orange King (New)—Bears giant flowers sometimes 3 inches in diameter. Color pure orange. Pkt. 10c. $\frac{1}{2}$ oz. 25c.

Lemon Queen—Like the above, but of pure lemon. Pkt. 10c. oz. 25c.

Favorite—Large fine flowers of deep cream with the petals edged yellow. Pkt. 10c. oz. 30c.

Double Mixed—A good mixture of 8 or 10 different shades of yellow and orange; some clear colors and some shaded and striped. Pkt. 10c. oz. 25c.

CANNA

A perennial growing 3 to 6 feet high. Suitable for bedding and back grounds. Plants have bright flowers and ornamental leaves. Soak seed in tepid water several hours before planting.

Crozy's Varieties—New large-flowered and free blooming variety. Height 3 ft. Mixed, Pkt. 10c.

Good Mixed—Height 5 to 6 ft. Mixed, Pkt. 10c.

CALLIOPSIS

These will grow luxuriantly in any situation and are most useful, affording a constant supply of richly marked flowers for cutting. All varieties are annuals. The tall varieties often reach a height of three feet. The dwarf varieties make splendid borders and low beds, forming round compact bushes which are literally covered with bloom.

Crimson King—A rich deep crimson. Height 8 to 10 inches. Pkt. 10c.

Golden Wave (Drummondii)—Large, rich, golden yellow flowers with chestnut-brown centers produced in abundance. Height, 18 inches. Pkt. 10c.

Tiger Star Mixed—The flowers are star shaped of rich red color; the end of each petal is spotted with golden yellow. Height 8 to 10 inches. Pkt. 10c.

Dwarf Bicolor Mixed—A splendid mixture of all the attractive varieties of this class. Pkt. 10c, 1/2 oz. 25c.

Tall Single Mixed—Contains all the choice tall single varieties. Pkt. 10c. oz. 30c.

Tall Double Mixed—These double and semi-double flowers have a graceful charming appearance. Pkt. 10c. 1/2 oz. 25c.

CANARY BIRD FLOWER (*Tropaeolum-Canariense*)

A tender, climbing annual of the nasturtium family. Blossoms have curiously winged petals and are light yellow. Pkt. 10c.

CALIFORNIA POPPY

See *Eschscholtzia*.

CARDINAL CLIMBER

A new annual climber of great merit, bearing a mass of small crimson flowers. Height 10 to 15 feet. Pkt. 15c.

CASTOR OIL BEANS

.See *Ricinus*.

A & M CANTERBURY BELLS

Campanula Medium—A hardy biennial, blooming the second year from seed, or the first if sown early. Grows about three feet high.

Single Blue Single Rose
Single White Single Mixed
Pkt. 10c.

Double Mixed—Pkt. 15c.

Calycanthema—A variety of Canterbury Bells having large semi-double flowers each resembling a cup and saucer.

Calycanthema Rose Pkt. 15c
Calycanthema White Pkt. 15c
Calycanthema Purple Pkt. 15c
Calycanthema Mixed Pkt. 15c



Chabaud's Carnation

CARNATION

Our strain of these popular flowers is unsurpassable in beauty and variety of coloring; also in their delightful fragrance. Seed should be sown in pots or boxes and when 2 to 3 inches high, may be transplanted to the open bed or border, giving shade until the young plants have become established. Sow any time between March and September.

Chabaud's Everblooming French Mixed—A very popular strain, easily raised from seed, producing beautiful double flowers. Pkt. 15c.

Grenadin Red—A valuable early-flowering variety coming quite true to color and producing an exceptionally large percentage of sweet scented double scarlet flowers. Pkt. 10c.

Marguerite White—An exquisite sweet scented fringed flower of pure white color. Pkt. 10c.

Black King—Very deep red, double flowers. Pkt. 15c.

Yellow—Double yellow, and yellow grounded picotees, Pkt. 15c.

Marguerite, Mixed Colors—This assortment gives a large percentage of fine double flowers. Pkt. 10c. 1/4 oz. 50c.

CENTAUREA CYANUS (Corn Flower or Bachelor's Button)

This old fashioned hardy annual is still a great favorite for cutting purposes. The deep rich blue is the most popular. The mixture contains shades of pink, white, lavender and blue.

Double White (New)—This is offered for the first time this year. It is absolutely pure white and is very double. A splendid cutting flower. Pkt. 15c.

Double Blue—A pleasing shade of blue but of much more substance than the single kind. Height 2 to 3 feet. Pkt. 10c. 1/2 oz. 35c.

Double Pink—Bright pink. Pkt. 10c.
Double Mixed—Pkt. 10c. oz. 40c.

CENTAUREA IMPERIALIS (Royal Sweet Sultan)

This is the variety so popular in the florist's store. The plants are of spreading habit and one plant has been known to keep a home replenished with cut flowers during the entire summer. Height, 3 to 4 feet. A hardy annual.

White Lavender Rose
Purple Mixed
Pkt. 10c. Separate colors, 1/4 oz. 35c.
Mixed, 1/4 oz. 25c.

Suaveolens Yellow—Similar to Imperialis but producing yellow flowers. Pkt. 10c. 1/4 oz. 35c.

CELOSIA PLUMOSA (Feathered Cockscomb)

Plumosa Mixed—A very fine selection of the popular feathered Celosia containing many pleasing shades of color varying from pale yellow to the deepest crimson. Pkt. 10c.

CELOSIA CRISTATA (Cockscomb)

Very ornamental and strong plants, producing magnificent combs of velvety looking flowers. They succeed well in the garden and make very attractive pot plants. Annual.

Dwarf Empress—A handsome strain, large and compact heads; color, splendid crimson. Height 10 inches. Pkt. 15c.

Dwarf Yellow—A variety producing flowers of an attractive hue. Pkt. 10c.

Dwarf Mixed—A mixture of rich velvety colors. Height 10 inches. Pkt. 10c.

Tall Crimson—Brilliant crimson combs borne on stems about 2 ft. tall. Pkt. 10c.

Tall Mixed—Contains shades of crimson and yellow. Height 2 ft. Pkt. 10c.

CELOSIA CHILDSII (Woolflower)

A new annual of great merit. As the name suggests, the flower resembles huge balls of wool. When cut, if it is hung head down until dry, makes a beautiful everlasting flower. Height 15 inches.

Yellow (New)—Dark Pink (New) Pkt. 25c each.

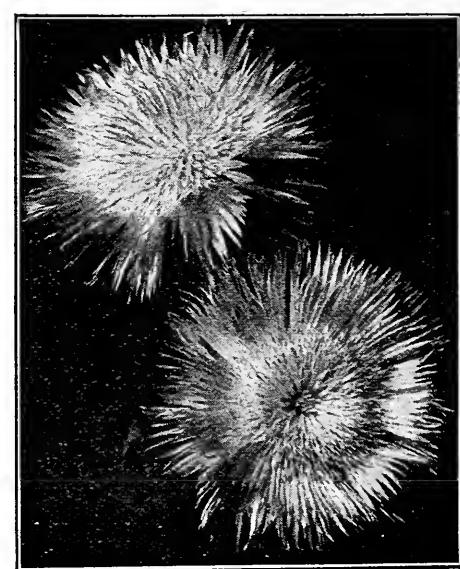
Crimson—Pkt. 15c. **Mixed**—Pkt. 15c.

CELOSIA CHRYSANTHEFLORA

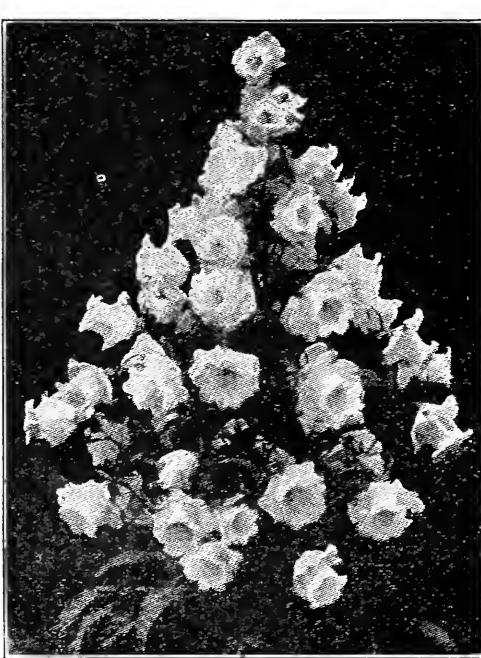
This is a new variety of Celosia obtained by crossing different species. The heads are very full and large and may be cut and dried as an everlasting flower. They are much admired for their velvety appearance and varied colors. Celosias are easily grown from seed which should be sown in the spring. Pkt. 25c.

CENTAUREA CANDIDISSIMA

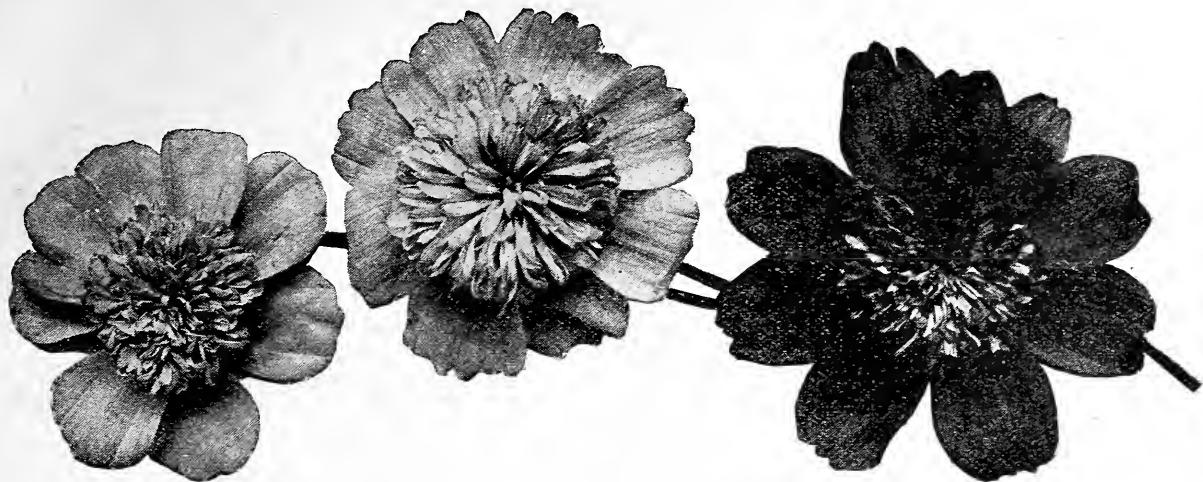
True Dusty Miller—Broad silvery white foliage; useful for edging. Height 12 inches. Pkt. 10c.



Centaurea Imperialis



Canterbury Bells



Crested or Anemone Flowered Cosmos

A & M GIANT FLOWERED COSMOS

An annual with fine-cut featherly foliage and large, showy blossoms. Cosmos are now divided into two distinct classes, the early and late varieties. The early flowering may be planted from early spring to late fall. The late flowering should be planted in late spring and summer for fall blooming. Plant out in the open where the flowers are intended to bloom. They are easily grown, make a fine showing and are wonderful cut flowers. No California home should be without A & M Giant Flowered Cosmos.

Early, Mammoth Flowering—An improved early type which blooms 60 to 75 days after planting. The plants reach a height of 3 to 4 ft. The flowers are large and the stems long enough for cutting. A fine all year flower.
Pink Crimson White
Pkt. 10c each, $\frac{1}{2}$ oz. 30c.
Mixed—Pkt. 10c, $\frac{1}{2}$ oz. 25c.

Extra Early Double Crested—This is an early variety of crested cosmos, blooming 60 to 75 days from planting. The flowers are very beautiful and excellent for cutting. The plants grow to a height of 3 ft. They may be planted from early spring till fall.
Pink Crimson White
Mixed—Pkts. 15c each.

Late Giant Cosmos—This variety should be planted in late spring and summer for fall blooming. The plants often reach a height of six feet and make a splendid background. One may have a wealth of bloom from a few plants and they are excellent cut flowers.

Pink White Crimson
Lady Lennox Pink Lady Lennox White

Mixed—Pkt. 10c each.

Separate Colors—Oz. 30c.

Mixed—Oz. 25c.

Crested or Anemone Flowered Cosmos

This variety has a decidedly double center with outer guard petal as shown in the above cut. This is made from an actual photograph of these flowers. This is a late blooming Cosmos and grows about 5 ft high. A lovely variety. Mixed colors. Pkt. 15c.

Double Cosmos—We have secured a small amount of seed of these beautiful double Cosmos. This is one of the finest of recent novelties and most exquisite of all for cut flowers.

Double Pink Double White
Double Crimson
Double mixed. Pkt. 25c. each.

CHRYSANTHEMUM (Annual Varieties)

Painted Daisy (Carinatum)—These daisy-like flowers are red, yellow and white, with rings around the centers of contrasting colors. Very attractive flowers and especially valuable for cutting. Pkt. 10c. oz. 40c.

Carinatum Double Crested or Double Painted Daisy—A new and most pleasing variation of the above; the double centers add to their gay appearance. A most satisfactory flower to grow. Pkt. 10c, $\frac{1}{4}$ oz. 25c.

Double Annual (Coronarium)—A showy double flower in white and yellow shades. They are spring and summer bloomers and do not resemble the fall perennial chrysanthemum. Pkt. 10c. oz. 30c.

(Perennial Varieties)

These are the hardy perennial varieties which flower in the fall and are usually propagated from cuttings. There is much pleasure in growing these from seed, the percentage of doubles is good and many novelties often result.

Indicum or Chinese—The large incurving variety. Pkt. 25c.

Japonicum or Japanese—The petals of this variety are long and twisted. Pkt. 25c.

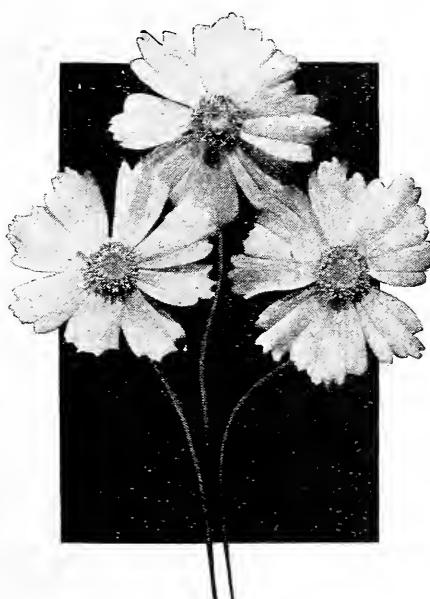
Nanum or Pompon—The small button-like variety so popular for cutting. Pkt. 25c.

CLEMATIS

A very fine hardy climber; leaves bright and glossy green; flowers small and hawthorne scented, and just covering the plant when in bloom. Excellent for covering trellises or fences.

Paniculata—White, Pkt. 10c.

Hybrids Mixed—Attractive shades of purple, lavender, white, etc. Pkt. 10c.



Coreopsis Lanceolata

CINERARIA

A tender perennial grown principally in the greenhouse, but can also be grown in sheltered spots in the open ground. Appreciated for its brightening effect during the winter months.

Hybrida Large Flowering, Semi-Dwarf—A splendid strain of compact growth with large heads of flowers. Each individual flower is large and there is a wonderful variation of colors. Splendid for growing in pots. Height 1 ft. Pkt. 35c.

Hybrida Large Flowering Tall—A tall variety often growing 18 inches high. The flowers, like the above, are large and have a wide range of colors. Pkt. 25c.

Hybrida Large Flowering Dwarf—A large flowering dwarf strain, having brilliant colored flowers and is especially good for outdoor bedding. Pkt. 25c.

CLARKIA

A hardy annual of easy culture, growing about 18 inches high and flowering in great profusion. Native of California. Seed sown in the fall will give early blossoms in the spring. Seed may also be sown in the spring and summer. Will grow in shade or sun.

Double Mixed—The long sprays of bloom resemble sprays of peach blossoms and are very showy. They make beautiful cut flowers and may be had in lovely shades of pink, rose, salmon, etc. Pkt. 10c.

Double Brilliant—Bright pink. Pkt. 10c.

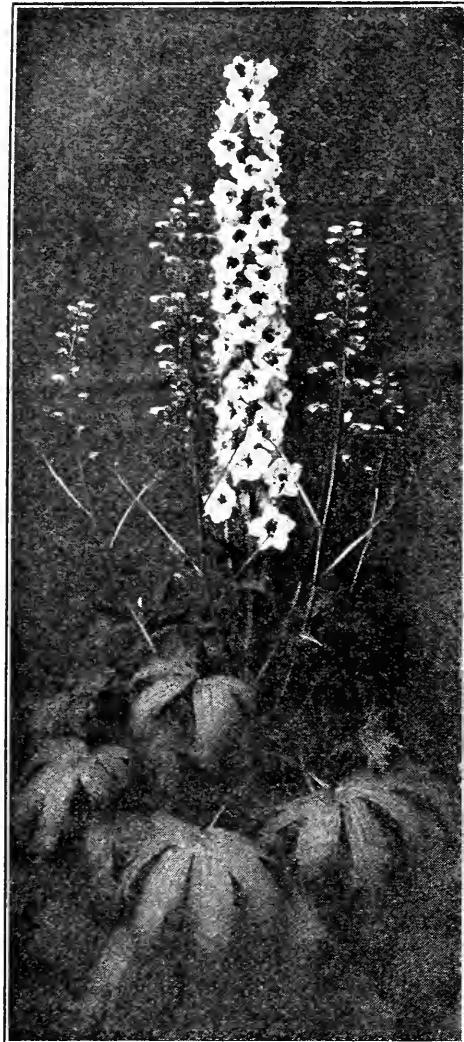
Double Chamois—Pink suffused with cream. Pkt. 10c.

Double Salmon Queen—Pkt. 10c.

Double Scarlet—Pkt. 10c.

COREOPSIS (Lanceolata Grandiflora)

This is a hardy perennial bearing a profuse and long continued succession of large, bold, golden yellow flowers during the spring and summer months. It is a splendid cut flower, the stems are long and the flowers keep well in water. Seed sown in the early spring will flower the same season. Seed may also be sown in the fall. Height 2 $\frac{1}{2}$ ft. Pkt. 10c.



Delphinium—Gold Medal Hybrids

COBAEA SCANDENS (Cup and Saucer Vine)

A perennial climber of rapid growth; very valuable for covering trellises, arbor, trunks of trees, etc. Will cling to any rough surface, often attaining a height of 30 to 40 feet in one season.

The large, bell-shaped flowers are very attractive.

Scandens Alba—White flowers. Pkt. 10c.
Scandens Purpura—Purple flowers. Pkt. 10c.

COLEUS

These ornamental foliage plants are very popular for growing in protected borders or for pot culture. They are tender perennials but make a satisfactory growth from seed the first year. A very interesting plant to grow from seed, for many new and fine color combinations are obtained in this way.

Extra Choice Mixed—Pkt. 25c.
Choice Mixed—Pkt. 15c.

COIX LACHRYMAE ("Job's Tears")

Curious ornamental grass with broad corn-like leaves and seeds of a light slate color. Valuable for winter bouquets with everlasting flowers. Strings of handsome beads are made from the seeds. Hardy annual; three feet high. Pkt. 10c. oz. 30c.

DATURA (Trumpet Flower)

Handsome ornamental annuals with large showy flowers. Grows to a height of 3 feet, will flower continuously throughout the summer. Pkt. 10c.

DELPHINIUM (Perennial Larkspur)

Beautiful, hardy border perennials with noble spikes of handsome flowers; very useful for cut flowers, etc. Sow in the spring or early fall in seed beds or boxes and transplant when large enough.

Belladonna

A lovely turquoise blue, which is a continuous bloomer. Splendid for cutting. This is the tall Delphinium so often seen in beds and borders and as cut flowers in the florist shops. Pkt. 25c.

Bellamosa

A rich deep blue in color and of the same type and habit of growth as the Belladonna. The two grow beautifully together. Pkt. 25c.

Cardinale

Scarlet perennial Larkspur. This handsome native flower grows to a height of 4 feet or more and produces its brilliant flowers during the early summer months. Pkt. 15c.

Chinensis Azure Fairy

A lovely azure blue Delphinium flowering from the seed the first season if the seed is sown in early spring. The height is twelve to eighteen inches. May be used for bedding, borders and cut flowers. Pkt. 10c.

Chinese Blue Butterfly

A fine dark blue of the same type as Azure Fairy with which it is often grown. Pkt. 10c.

Gold Medal Hybrids

The finest hybrids to be found in Delphinium and all the lovely blues, lavenders and mauves are in this mixture. The plants are vigorous growers, producing tall, handsome spikes. Pkt. 15c.

Fine Mixed

A very pleasing mixture which blooms the first year from seed sown in the early spring. Pkt. 10c.

CYCLAMEN

A tender, bulbous perennial, used in greenhouses and window gardens. It is easily grown from seed. Sow in the fall or early spring.

Persicum Giganteum—Flowers of extraordinary size. The leaves are proportionately large, marked with silver-grey.

Bright Salmon—Pkt. 35c.

Deep Red—Pkt. 35c.

Extra Choice Mixed. Pkt. 35c.

Rose White Choice Mixed. Pkt. 25c.

CYPRESS VINE (Ipomea Quamoclit)

A tender climbing annual with fern-like foliage and small star-like red or white flowers. A beautiful vine for growing in porch boxes, hanging baskets, etc., or for covering trellises. Soak the seed 3 hours before planting. *Mixed* Pkt. 10c.

CUPHEA

Mineata Hybrids Mixed—A half hardy perennial which is useful for making permanent borders. The small tubular flowers are crimson scarlet and orange. Height, 1 ft. Pkt. 10c.

DAHLIA

Although not generally known Dahlias are easily grown from seed. If planted early in a hot bed and transplanted when danger of frost is past they will bloom the first season and make large bulbs by the next fall.

Cactus—Our mixture contains many of the recent novelties. Giants with pointed petals.

Extra Choice Mixed—Pkt. 25c.

Double—Choice mixed colors in great variety and flowers of excellent form. Pkt. 15c.

Single Mixed—Seed saved from the choicest varieties. Pkt. 10c.



Dimorphotheca Aurantiaca

DIMORPHOTHECA (The Golden African Daisy)

A showy annual from South Africa which has become a great favorite on account of its easy culture and beautifully colored flowers. The colors include all shades of yellow, orange, cream and white and massed in beds or wide borders they have a very brilliant effect. They may be planted during the fall, spring or summer.

Aurantiaca—Brilliant orange. Pkt. 10c.

Hybrids—Mixed Colors. Pkt. 10c.

SHASTA DAISY

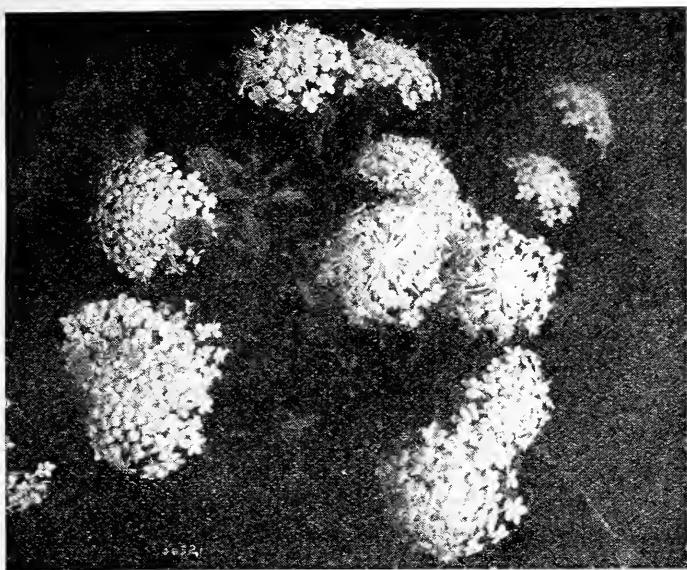
This popular flower has been much improved and the Alaska is the finest of all. The Shasta Daisy is noted for its keeping qualities as a cut flower. They should be planted in the fall or early spring. If planted in late fall will not bloom until the following spring.

Alaska—The finest. Pkt. 15c.

Ordinary—Pkt. 10c.



Shasta Daisy



Didiscus—Blue Lace Flower

DIGITALIS (Foxglove)

A hardy perennial, blooming the second year from seed. Grows usually about 3½ feet, although in very rich soil sometimes 6 feet. The bell shaped flowers are borne on long spikes, and come in shades of purple, lavender, rose and white, all spotted lightly inside the blossom. Thrives best in cool, shady locations. Fine Mixed—Pkt. 10c.

DOLICHOS OR HYACINTH BEAN

Tender, climbing annual. Grows rapidly and is valuable for covering a trellis. Flowers in purple and white. Sow seed in open ground late in April.

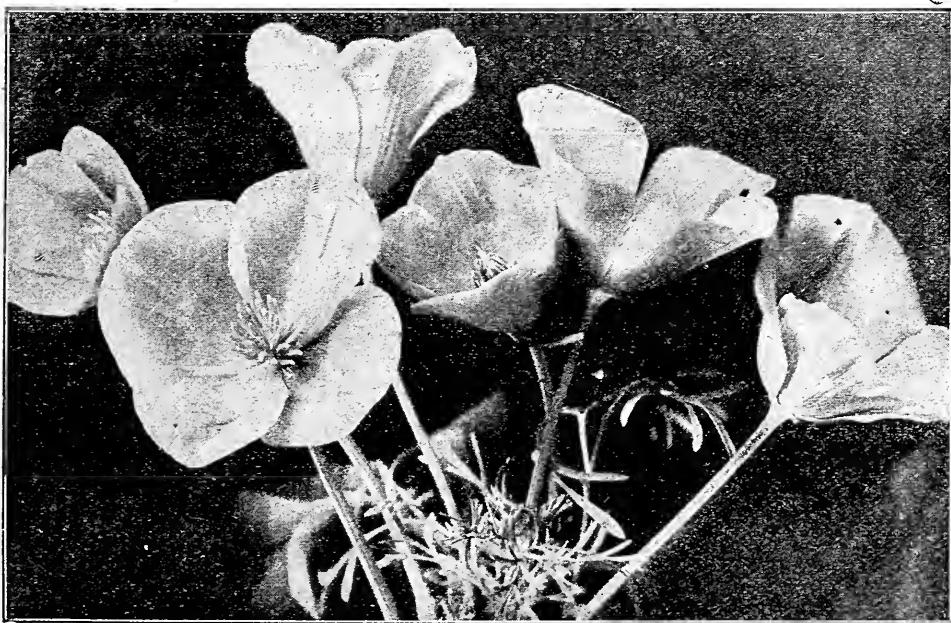
Mixed—Pkt. 10c.

DUSTY MILLER

See *Centaurea Candidissima*.

EVERLASTING FLOWERS

See *Acroclinium*, *Ammobium*, *Gomphrena*, *Helichrysum*, *Statice*, *Rhodanthe*, *Xeranthemum*.

A & M CALIFORNIA POPPY

Eschscholtzia California Poppy

NEW COLORS IN CALIFORNIA POPPIES

Orange Flame—Vivid orange-scarlet and most striking of all the new colors. The plants are very erect and compact and would do for borders. Pkt. 25c.

Ballet Girl—The outside of the petals is an intense carmine, the inside a light cream, making a contrast of colors both beautiful and startling. Pkt. 25c.

Tango—A bronzy red overlaid terra cotta. This variety was introduced recently and found immediate favor. Pkt. 25c.

Mauve Beauty—An entirely new color. Is a beautiful shade of pure mauve. Pkt. 25c.

Lovely—True to its name this variety is a bright rose pink suffused with salmon. The blooms have a satiny appearance which adds much to their loveliness. Pkt. 25c.

The Geisha—The inside of the petals is a brilliant gold and the outside orange-crimson. The petals are fluted, which makes the open flowers very attractive. Pkt. 25c.

**DIDISCUS COERULEUS
(Blue Lace Flower)**

This beautiful lace flower is a very attractive cut flower of a lovely blue shade and is most effectively used when mixed in bouquets. The culture is easy and being a hardy annual may be planted from early spring to late summer. If you like to raise your own cut flowers you will be glad to have this in your collection. Pkt. 15c.

DIANTHUS OR PINKS

Hardy annuals, about 1 foot high, and bearing beautifully colored single and double blossoms in profusion all summer. Sow seed early in boxes and transplant, or sow in rows where the plants are to remain, and thin. They are largely used for border, massing in beds and for cutting. There is a wide range of colors from purest white through all shades of pink to deepest red.

Double Annual

Chinensis Double Mixed, Pkt. 10c.
Hedgewigi, Double Mixed, Pkt. 10c.

Single Annual

Hedgewigi, Single Mixed, Pkt. 10c.

Perennial

Plumarius (Grass Pink)—A hardy perennial pink used for borders and cutting and producing a constant bloom of flowers of varied hues.

Double Grass Pink, Mixed. Pkt. 10c.
Single Grass Pink, Mixed. Pkt. 10c.

DUSTY MILLER

See *Centaurea Candidissima*.

EVERLASTING FLOWERS

See *Acroclinium*, *Ammobium*, *Gomphrena*, *Helichrysum*, *Statice*, *Rhodanthe*, *Xeranthemum*.

**ESCHSCHOLTZIA
(California Poppy)**

Hardy annual. Seed may be sown from October until April. Fall sown seed will bring large early flowers.

Some wonderful new varieties have been produced recently. Remarkable color combinations which make striking beds and splendid cut flowers. California Poppies have a long blooming season which may be prolonged by cutting off the seed pods.

Standard California Poppies

California Yellow—Bright yellow. Pkt. 10c.

California Deep Orange—True California Poppy. Pkt. 10c.

California White—A re-selected pure white. Pkt. 10c.

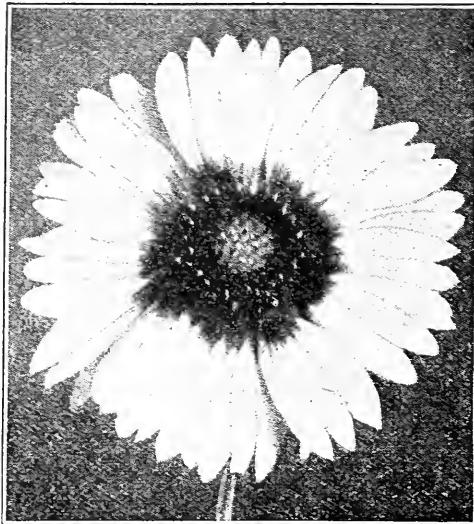
California Golden West—Yellow with orange center. Pkt. 10c.

California Crimson—Carmine Crimson. Pkt. 10c.

Scarlet Beauty—The brightest color of all, being a deep scarlet and as the plants are erect and the flowers large it gives the effect of vivid scarlet tulips. Pkt. 25c.

Extra choice mixed—Contains the above, also many other of the newer colors. Pkt. 15c.

Collections of the above seven named and one mixed variety, \$1.50.



Gaillardia Grandiflora

EVERLASTING PEASSee *Lathyrus Latifolius*.**FLAX**See *Linum*.**FLOWERING SAGE**See *Salvia*.**FOUR O'CLOCK (Mirabilis)**

Also called Marvel of Peru. A hardy annual of easy culture, growing about 2 feet high. The plant is free flowering, bearing blooms of a great variety.

Mixed—Pkt. 10c.

FOXGLOVESee *Digitalis*.**FORGET-ME-NOT
(Myosotis)**

A hardy perennial with small blue star-like flowers borne in clusters on long stems. Will bloom the first year if sown early and does best if sown in a box and then transplanted to a cool moist situation.

Alpestris Tall—Light blue flowers, strong, long stems and vigorous growers make this a popular variety. Pkt. 10c.
Victoria Dwarf—Large flowers; bright azure blue with yellow center; plant symmetrical, dwarf and strong grower. Pkt. 10c.

FREESIA

These dainty little popular flowers may be grown from seeds or bulbs. They flower very early in the spring and are one of the most delightfully fragrant flowers in cultivation. Freesias are easily grown from seeds and will bloom the following spring if sown in the fall.

Purity—White. Pkt. 10c.

Hybrid Ragonieri (Rainbow)—A pleasing mixture of pastel shades. Pkt. 25c.

GERANIUM

A half-hardy perennial, flowering the first year from seed if sown early. A gorgeous flower of numerous shades of color; bearing continuously renders this one of the most popular plants grown.

Mixed Large Flowers of Fancy Show—This choice mixture includes many of the newest and finest sorts. Pkt. 25c.

Lady Washington Mixed—A very popular variety of geranium. The flowers are particularly beautiful. It is very interesting to grow from seed, many extra choice varieties are often obtained. Pkt. 25c.

GEUM

A beautiful hardy perennial producing flowers in profusion from spring till fall. It is an excellent cut flower, having long stems and keeping well.

Mrs. Bradshaw's Double Red—Large bright orange-scarlet double flowers. Pkt. 15c.

GERBERA**(Jamesonii Hybrids)**

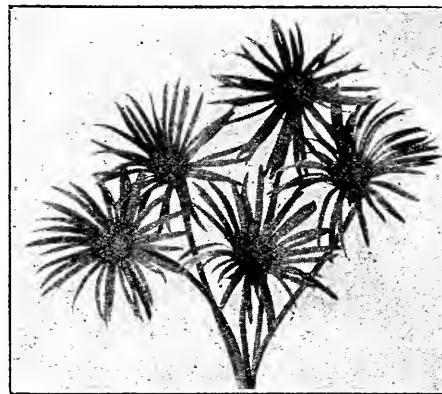
Large daisy-like blossoms with flower stems rising to a height of about two feet. Is also called Transvaal Daisy. Colors range from white to crimson, pink, rose, yellow and lilac shades. Flowers both summer and winter. Start carefully under glass and grow in a sandy, well drained soil if possible. Pkt. 25c.

GAILLARDIA

Beautiful show plant, remarkable for the profusion, size and brilliancy of its flowers, continuing in bloom from early summer till late in the fall. Excellent for beds, borders, or for cutting. Height 18 inches.

Grandiflora—Single perennial variety of varying shades of reddish brown and yellow. Pkt. 10c.

Picta Lorenziana Double Mixed—Large heads of bright yellow and red flowers. Very double, with quilled petals, suitable for bouquets. Pkt. 10c.



Gerbera

GLOXINIA

A superb house or greenhouse plant with large, bell-shaped flowers produced in the richest colors. The seed is very fine and must be handled with great care but the plants form bulbs which will blossom freely each season for several years.

Extra Fine Mixed—An unsurpassed mixture containing the finest spotted hybrids and best self colors. Pkt. 50c.

GODETIA

A hardy annual, very valuable for bedding and borders. For mass effects in shades of rose, red or pink it is unequalled. The satiny cup-shaped flowers cover the compact-growing plants. The seed should be sown in the fall or early spring.

Dwarf Single Mixed—Height 10 to 15 inches. Pkt. 10c.

Tall Single Mixed—Height 18 to 24 inches. Pkt. 10c.

Tall Double Mixed—A new variety of Godetia of a tall branching habit of growth. The flowers are borne in great profusion along the stems and have the same satiny luster of the single kind. Are very attractive when used as cut flowers. A choice mixture. Pkt. 10c.

GOMPHRENA

Entirely different in appearance from any other everlasting flower, and very attractive. Has a globe-shaped flower resembling a clover blossom which when cut and dried holds its shape and color well.

Mixed Pkt. 10c., 1/2 oz. 25c.

**GYPSOPHILA
(Baby's Breath)**

A hardy annual of easy culture. Grows two or three feet high, and bears a profusion of small star-shaped white or pink flowers.

Elegans—Annual white. Very largely grown by florists for use in bouquets. Pkt. 10c., oz. 25c.

Elegans Carmine—A recent introduction of a deep carmine. Pkt. 10c., oz. 30c.

Paniculata—Fine for bouquets; white flowers, perennial. Pkt. 10c.



Gypsophila Elegans



Helichrysum

HELICHRYSUM (Straw Flower)

A free-flowering, hardy annual, growing four or five feet high and bearing beautiful straw-like flowers in a great variety of shades and colors. The following are the most popular strains of this well-known flower offered in separate colors:

- Canary Yellow—New. Pkt. 10c.
- Salmon—A bright salmon pink. Pkt. 10c.
- Silver Globe—A glistening white. Pkt. 10c.
- Golden Ball—Deep golden yellow. Pkt. 10c.
- Fireball—Bright scarlet. Pkt. 10c.
- Violet—Pkt. 10c.
- Separate Colors— $\frac{1}{4}$ oz. 25c.
- All Colors Mixed—Pkt. 10c. $\frac{1}{2}$ oz. 35c.

HELIANTHUS

See Sunflower.



Hunnemannia

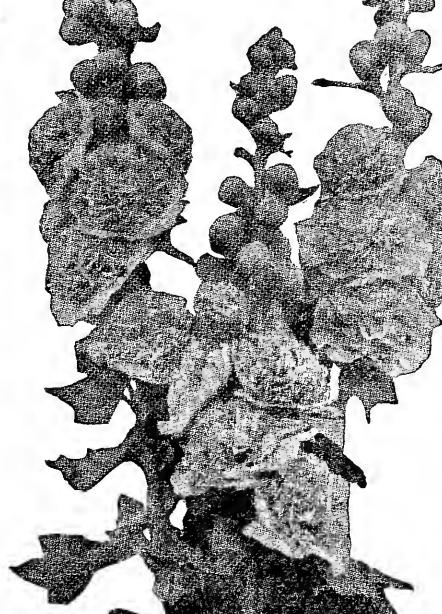
A & M HOLLYHOCKS

A hardy perennial of upright, stately growth, five to eight feet high, unequalled for a background or covering ugly places. The seed may be sown in the fall and will bloom the following spring. If sown in the early spring many will flower in the summer. The seed is generally sown in seed beds and transplanted where they are to grow. The following are the finest double flowering varieties.

- Double Maroon—Deep red. Pkt. 10c.
- Double Scarlet—Pkt. 10c.
- Double Rose—Pkt. 10c.
- Double Newport Pink—Bright pink. Pkt. 10c.
- Double Yellow—Pkt. 10c.
- Double White—Pkt. 10c.
- Double Mixed—Pkt. 10c.

Perennial Single Mixed—Pkt. 10c.
Allegheny—This unique and beautiful variety produces semi-double flowers about 3 inches across. The petals are crinkled and fringed like crumpled and slashed satin. Pkt. 10c.

Annual Single Mixed—A recent introduction in hollyhocks. This fine single mixture if sown in the spring will flower the first year. Pkt. 10c.



A & M Double Hollyhock

HUNNEMANNIA (Bush Eschscholtzia)

Known also as the Mexican Tulip Poppy. An erect-growing, tender perennial, about 2 ft. high. Foliage fine-cut, blossoms beautifully cup-shaped, bright yellow and about three to four inches across. Stems, long and smooth. Unlike the average poppy, Hunnemannia will keep for several days in water and makes a splendid cut flower. Pkt. 10c.

HELIOTROPE

A half-hardy perennial growing four to eight feet high. Small flowers, borne in graceful clusters and very fragrant. Blooms the first season from seed if sown early. Forms a large plant and requires a roomy situation.

Finest Mixed—A mixture of the best types in shades of white, mauve and purple. Pkt. 10c.

KENILWORTH IVY

An attractive little perennial trailing plant, very useful for baskets, pots and rock work. Pkt. 10c.

HUMULUS (Japanese Hop)

A rapid growing ornamental climber covering arbors, trellises, etc. in one season. The foliage resembles the common Hop and is very luxuriant, making a dense vine. Will stand extreme heat and remain green until frost. An annual.

Japonicus—Green foliage. Pkt. 10c.

Japonicus Variegatus—Beautifully splashed and striped with silver. Pkt. 10c.

IPOMOEA

Splendid rapid growing climbers. The flowers are beautiful and varied and resemble giant Morning Glories. The foliage is luxuriant and makes a growth of 10 to 30 feet a season. The seed of several varieties, especially the moon flower, should have the outer shell punctured and then soaked in water for twelve hours or more to germinate it.

Coccinea—Brilliant scarlet flowers with small foliage. Pkt. 10c.

Bona Nox (Evening Glory)—Fragrant violet flowers, expanding in the evening. An annual. Pkt. 10c.

Grandiflora Alba (White Moonflower)
Large white fragrant flowers which expand at night and early morning. Annual. Pkt. 10c.

Heavenly Blue—Sky blue flowers and one of the most attractive of Ipomoeas. An annual. Pkt. 10c.

Leari—Large deep blue flowers expanding at night. A perennial vine sometimes called Blue Moonflower or Blue Dawnflower. Pkt. 10c.

JOB'S TEARS

See Coix Lachrymae.

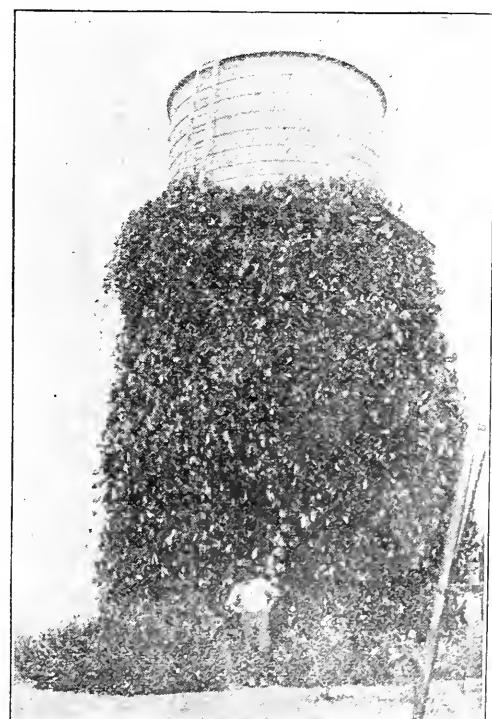
KOCHIA (Summer Cypress)

Childsii Improved—A splendid ornamental annual plant, forming dense oval bushes, 2 to 4 feet high, of small feathery light green foliage. As summer advances this changes to a carmine hue and finally to a fiery red. A very attractive plant at all times. Also called "Burning Bush." Pkt. 10c. oz. 25c.

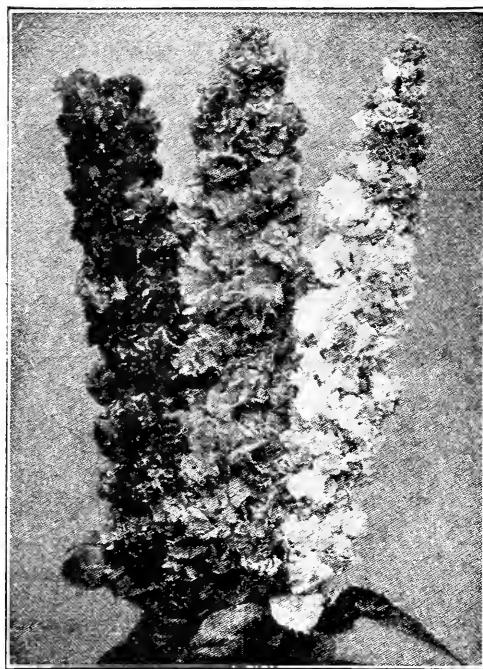
KUDZU VINE

(Pueraria Thunbergiana)

One of the most rapid growing vines known, often making 40 feet in a season. It may be trimmed frequently for stock feed. All kinds of animals eat it readily, especially good for milch cows and goats. The seed is slow in germinating and should be punctured or soaked over night in warm water. Pkt. 10c.

Kudzu Vine (Pueraria Thunbergiana)
2 Years Old

A & M LARKSPUR



A & M Larkspur Mixed

(Tall Double Stock Flowered)

Are the finest strains and produce a wonderful show in any garden. The double flowering varieties, with their long spikes, are excellent for cut flowers. They should be planted in beds, or as a back ground for other small plants. With the great variety of colors one may carry out most any color scheme desired, and the bright shades will add a touch of beauty to the garden that will be a pleasure to note. They are easily grown and we know of nothing that will produce a greater show. By all means include a general assortment of A & M Larkspur in your garden for early spring blooming.

Lustrous Carmine—The glowing color, large individual flowers set closely together in a spike and long graceful stems makes this an ideal cut flower. **Pkt. 10c.**

Exquisite Pink—An entirely new color in Larkspur being a lovely bright pink. It holds its color well and has all the fine qualities of tall double larkspur. The supply of seed is quite limited. **Pkt. 25c.**

Light Blue—A clear light ageratum blue. **Pkt. 10c.**

Dark Blue—A rich deep blue. **Pkt. 10c.**

Rose—A soft rose pink. **Pkt. 10c.**

Lilac—A soft lilac. **Pkt. 10c.**

White—An improved pure white. **Pkt. 10c.**

Mixed—A Choice mixture. **Pkt. 10c.**

LANTANA

A tender perennial. The plants become shrubs either large or small according to variety. They are used for borders, hedges and specimen plants, and bear verbena-like clusters of flowers. The mixtures which we offer contain scarlet, orange, white, yellow, rose and other colors. We do not have separate colors.

Choice Tall Mixed—Height, 3 to 5 feet. **Pkt. 10c.**

Choice Dwarf Mixed—Height 1 to 3 feet. **Pkt. 10c.**

LATHYRUS LATIFOLIUS

Everlasting Pea—A hardy perennial climber of great beauty with elegant sweet pea-like flowers in great profusion; height, 6 to 8 feet.

Pink Beauty, White, Red, Fine Mixed. **Pkt. 10c. ea.**

LAVATERA

Splendens Rosea—An annual of easy culture growing 2 to 3 feet in height. The plants are bushy and bloom profusely through the summer and fall. The flowers resemble single Hollyhocks and make attractive bouquets when cut. **Pkt. 10c.**

LINUM (Scarlet Flax)

Grandiflorum Rubrum—A hardy annual of slender and graceful appearance with fine foliage and bright red flowers. It makes beautiful beds or borders and is largely used for cut flowers. Scarlet Flax makes a fine fall and winter flower, blooming profusely for several months. May also be sown in the spring. Height 1½ to 3 feet. **Pkt. 10c.**

MATTHIOLA BICORNIS

(Night Scented Stocks)

An old-fashioned annual whose purplish flowers are not particularly beautiful but which is much grown because of the delightful fragrance emitted in the evening. **Pkt. 15c.**

LOBELIA

This hardy annual grows four to six inches high, is of compact growth, and literally covered with small bright flowers. By cutting back the plants during the summer and giving plenty of water they may be kept in flower all summer. Used for ribbon work and borders or hanging baskets.

Bernard's Perpetual—Flowers brilliant ultramarine blue, with a pure white mark at the base of each one of the two lower petals; height, 6 inches. **Pkt. 10c.**

Crystal Palace—Undoubtedly the finest dwarf blue Lobelia for bedding. Plants very compact, profusely covered with rich blue flowers. Height, 4 inches. **Pkt. 10c.**

Hamburgia—A trailing variety specially suited as a graceful plant for hanging baskets. Light blue. **Pkt. 10c.**

Compact Light Blue (Emperor William)
A dwarf light blue with light green foliage. **Pkt. 10c.**

Royal Purple—Deep rich, blue-purple flower, height 6 inches, very compact. **Pkt. 10c.**



Lobelia Crystal Palace

LOVE-IN-A-MIST

See Nigella.

LUPIN

One of our most attractive and easiest grown native flowers. The plants grow 2 to 3 ft. high and have handsome spikes of flowers which are fine for cutting. If the plants are not allowed to go to seed they flower for several months in the spring.

Hartwegi Dark Blue—**Pkt. 10c.**

Hartwegi Sky Blue—**Pkt. 10c.**

Hartwegi Mixed—**Pkt. 10c.**

Sulphureus Yellow—A bright, clear yellow, growing about 3 feet high. Splendid for cutting. **Pkt. 10c.**

Perennial Lupin—A very beautiful hardy perennial. The foliage is a soft green and the stately spikes of flowers rise several feet above the foliage. They bloom continuously during the spring.

Choice Mixed—**Pkt. 15c.**

MANDEVILLA SUAVEOLENS

Chili Jasmine—An attractive climber with large white or blush white fragrant flowers. The flowers often measure 2 inches across and bloom in racemes. Height 10 to 15 ft. **Pkt. 10c.**

MATRICARIA (Fever Few)

Double White (Capensis)—A perennial bearing small double white flowers. Good for cutting. An old fashioned garden flower. **Pkt. 10c.**

Golden Ball—A compact dwarf plant, used for borders. The flowers are a double yellow and bloom freely. **Pkt. 10c.**

MARVEL OF PERU

See Four O'Clock.

MOONFLOWER

See Ipomoea.

ICE PLANT**(Mesembryanthemum)**

Crystallinum—The variety is largely grown for the glistening foliage. The leaves are large, fleshy and covered with glistening dots. The flowers are small and white. This is not the trailing variety used on banks. Pkt. 10c.

MIGNONETTE

Hardy annual, growing 6 to 12 inches high and bearing pyramid-shaped spikes, exceedingly fragrant.

The seeds may be sown from early spring until fall for a succession of bloom. It is used for bedding, borders, and cut flowers.

A & M Colossal—A new giant Mignonette. The spikes are two to three inches in diameter and each plant has many spikes. The flowers are a deep cream and fragrant. A novelty worth having. Pkt. 15c.

Allen's Defiance—Long spikes of whitish flowers and compact growth. Pkt. 10c.

Goliath Red—Robust growing variety with enormous spikes of red colored flowers; height, 15 inches. Pkt. 10c.

Machet Mixed—A dwarf compact variety, with large stubby spikes covered with copper-red flowers. Pkt. 10c.

Odorata Mixed—Sweet scented. Pkt. 10c. oz. 25c.

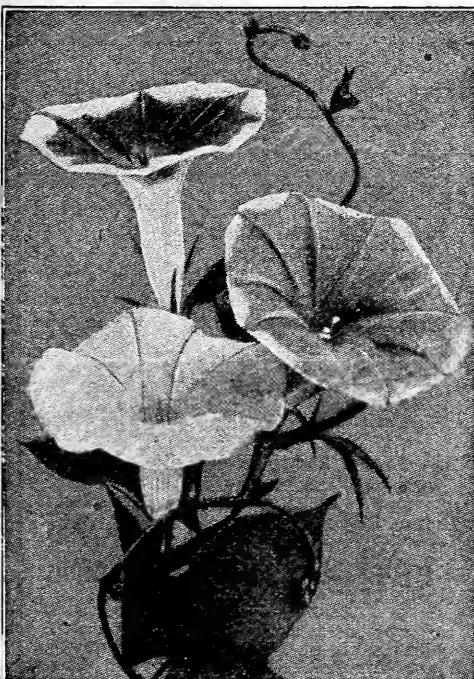
**A & M MORNING GLORY
(Convolvulus)**

Free flowering, beautiful climbers with rich and varied colored flowers; very useful for covering lattice work, verandas, etc., where they are exceedingly effective. Soak the seed for several hours in warm water before planting.

Major Tall Mixed—Attains a height of 15 feet or more, and comes in shades of Rose, Crimson, Blue and White. Pkt. 10c. oz. 20c.

Minor Dwarf Mixed—A beautiful hardy bedding and border plant, attaining a height of about 1 foot. Pkt. 10c. oz. 25c.

Imperial Japanese Morning Glory—The best Morning Glory for strong growth and varying colors. Height 15 to 20 feet. Pkt. 10c. oz. 25c.



Japanese Morning Glory

A & M MARIGOLD

A & M strains of Marigold are becoming increasingly popular, and below we offer varieties which are most in demand.

Marigold is a hardy annual, in dwarf and tall varieties, growing from 6 in. to 3 feet high. The flowers are various shades of yellow and brown. The tall varieties are very valuable for large bedding or background work, and the dwarf varieties for borders.

African

African Tall Double Orange—Beautifully formed flowers of gigantic size and bright color; height, 2½ feet. Pkt. 10c.

African Tall Double Lemon—Like the above but a pure citrus yellow. Pkt. 10c.

African Tall Double Mixed—Pkt. 10c.

African Dwarf Double Mixed—Pkt. 10c.

French

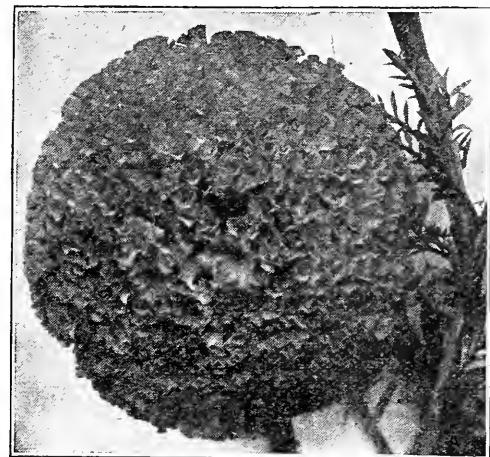
The flowers are much smaller than the African, but are greatly prized for bedding.

Tall French Mixed—In shades of yellow, brown and tricolors. Height, 2 ft. Pkt. 10c.

Dwarf French Mixed—Like the above but only 10 inches high. Pkt. 10c.

Dwarf French Legion of Honor—The flowers are single and a dark, velvety brown, gracefully surrounded by a distinct gold ring. The compact, bushy plant flowers abundantly and is more lasting than any other annual. Pkt. 10c.

Dwarf French Golden Ball—A double golden yellow of very compact growth. Very fine for ribbon borders and beds. Blooms profusely. Height 1 ft. Pkt. 10c.



A & M African Tall Marigold

NEMESIA

Hardy annual. This flower is obtainable in numerous shades of beautiful colors, and when grown in mass form, gives a fine effect. Sow in a seed bed early in the spring and transplant.

Strumosa Suttoni—Mixed colors, height 15 inches. Pkt. 25c.

Nana Compacta, Triumph Mixed—A brilliant mixture of colors making a fine low border or bed. Height 6 in. Pkt. 25c.

NEMOPHILA

A hardy California annual growing about six inches high. The blossoms are cup-shaped and the colors are blue, white, lavender and spotted. The seed may be sown from October to March and is very valuable for carpet bedding.

Insignis (Baby Blue Eyes)—Sky blue, with white eyes. Pkt. 10c.

Choice Mixture—Pkt. 10c.

**NICOTIANA, OR
FLOWERING TOBACCO**

A hardy annual growing 3 to 4 feet high and of branching habit. The plants are covered with the slender tubular flowers all summer. They may be used as a back ground or as single specimens.

Affinis—White, and very fragrant. Pkt. 10c.

Sanderae Mixed—A new, large, flowering type, with various bright-colored blossoms. Pkt. 10c.

ORNAMENTAL GRASS

This mixture of grasses is grown for their grace and beauty in the garden and for their cutting value. They are very decorative used either alone in vases or mixed with other flowers. Plant in the spring in the open ground. Pkt. 10c.

OENOTHERA

Evening Scented Primrose—A tall growing plant bearing an abundance of large yellow flowers which expand in the evening. Height 2 to 3 feet. May be planted in part shade. Pkt. 10c.

MYOSOTIS

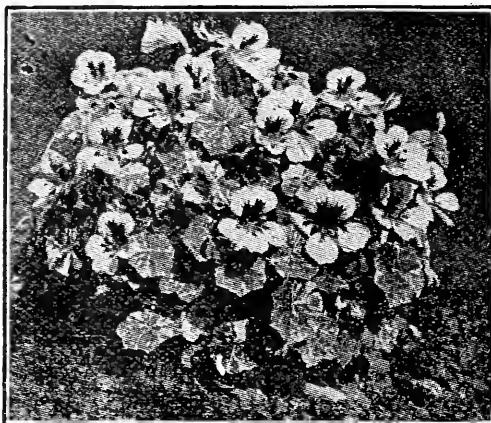
See Forget-Me-Not.

NIGELLA**(Love-in-a-Mist)**

A hardy annual, one foot high, with finely cut foliage. Oddly shaped blossoms in blue and white, and curious seed pods. Of easy culture.

Miss Jekyll—Long stemmed flowers which are of a clear corn-flower blue; elegant foliage; height, 18 inches. Pkt. 10c.

Mixed Colors—Blue and White. Pkt. 10c.



A & M Nasturtium Dwarf

NASTURTIUM COLLECTION

One each of your selection. 3 packets 25c, 6 packets 45c, postpaid.

A & M NASTURTIUMS

These favorite and well known flowers are popular because of the great variety of colors which may be obtained with very little labor. They are not particular as to soil, fertility or cultivation and may be seen at the beach resorts growing in banks of pure sand where they get little or no attention. If you have an unsightly spot, plant A & M Nasturtiums and convert it into a beauty spot. The Dwarf varieties may be used for bedding and borders while the tall climbing varieties may be used for covering unsightly fences and fence corners. The nasturtium is known to most every one but few people appreciate its real value for the uses we have described. They will bloom in a few weeks after planting and will continue until cut down by the frost. A & M Nasturtiums are blended in pleasing mixtures and carry a great variety of color.

Dwarf

Aurora—Terra Cotta.

Empress of India—Dark scarlet, dark leaved.

Golden King—Indian yellow, dark leaved.

Ruby King—Bluish rose.

Ivy Leaved Dwarf Mixed.

A & M Dwarf Mixed.

Pkt. 10c each, oz. 20c.

Tall

Jupiter—Golden yellow.

Regelianum—Purplish crimson.

Twilight—Yellow marbled salmon rose.

King Theodore—Bright crimson, dark leaved.

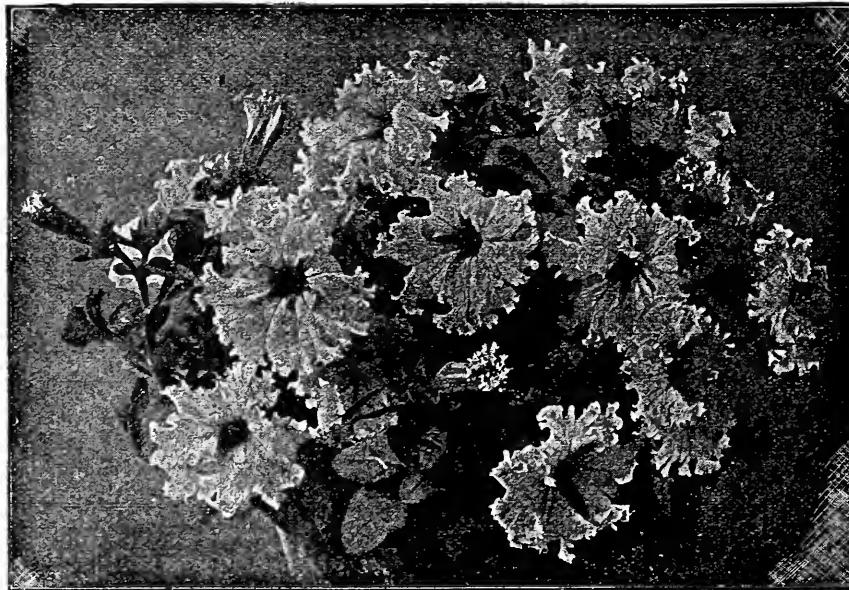
Scarlet.

Ivy Leaved Tall Mixed.

A & M Tall Mixed. Pkt. 10c each, oz. 20c.

A & M PETUNIAS

A splendid race of plants, rich and varied colors, and profuse flowering with their charming and tender looking flowers, they are very beautiful for groups in the open. Sow seed early in spring, scatter thinly on an even surface and barely cover the seed with sand. If intended for the open ground, plant out into a frame to be kept until planting-out time. If for pots, pot singly into small pots in strong rich soil mixed with sand and shift as the plants grow larger.



Ruffled Giant Petunias

Superb Double Fringed Mixed

One of the finest strains of Petunias in existence. The double flowers are very large, full and symmetrically formed, having the edges of the petals beautifully fringed. Pkt. 50c.

Giants of California

A California introduction. An extremely fine type of this well known flower. A mixture which will be appreciated by all growers of Petunias. Pkt. 35c.

Ruffled Giants

A beautiful, deep throated new strain with flowers that are ruffled, fluted and fringed. Solid intense colors. Pkt. 25c.

Grandiflora Single Mixed

Exceedingly handsome and free flowering, containing the greatest variety of colors, yellow throated, veined and blotched. Very large flowers. Pkt. 15c.

Hybrida Fine Mixed

A good Petunia for massing in beds and borders, yielding a profusion of brilliantly marked flowers. Pkt. 10c.

PETUNIA COLLECTION**No. 1—75c**

One each of Lord Courtenay, Giants of California, and Superb Double Fringed Mixed.

PETUNIA COLLECTION**No. 2—40c**

Bed and Border Combination. One each of Nana Erecta Snowball, Nana Erecta Rosy Morn and Nana Erecta Violacea.

A & M PANSIES

Pansies thrive best in a moist, sunny location and in rich, loamy soil. Seed should be sown in the autumn for early spring blossoms, or can be sown early in the year for good flowers later in the spring. The plants must be transplanted twice in order to get the largest flowers; once from the seed box to a chosen bed, and again to the open garden. This is important for large size pansies; use manure liberally. The blossoms are usually larger in the spring and again in the fall, and while they bloom freely all summer, the blossoms are small during the hot months.

MASTODON PANSIES

These magnificent giant pansies are without a doubt, the most wonderful pansies of the day, with a robust vigor unknown in any other strain. These blossoms are almost four inches across and are of a most wonderful variety of colors and variegations. They bloom from two to four weeks earlier than any other variety of pansies. It is impossible to paint a word picture that will do justice to these flowers. You will never regret it, if you have them in your garden or porch box.

Adonis.—Lovely Sky-blue. Pkt. 25c.

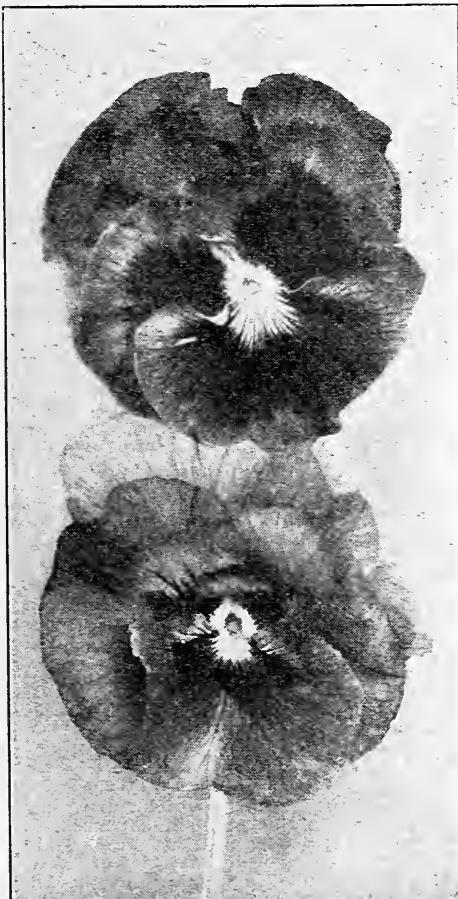
Bronze Mastodon.—Very large, with all the different shades from burnished brass to gold, with no two flowers exactly alike. Pkt. 25c.

Madame Steele.—Elks Purple, of fine form and enormous size. Pkt. 25c.

Panama Pacific.—A huge deep yellow; some have the dark center, some without. A beautiful bedding color. Pkt. 25c.

White Mastodon.—Snow white with a large center, very large and beautiful. Pkt. 25c.

Mastodon Mixed.—A wonderful collection of rich velvety shades, in great variety, with fine long stems. Pkt. 25c.



A & M GIANT STRAINS

We offer Pansies in the following separate colors. They have been selected with care in order to give a complete range of colors from which to choose. Wonderful color effects and an abundance of plants can be had from planting a few packets from the following:

Special offer—Your choice of ten regular 15c packets. \$1.00.

Giant Aurora—Probably the best pure white of the Giant strain. Pkt. 15c.

Giant Azure Blue—Gigantic blooms of a delicate pale shade, freely produced on compact plants. Pkt. 15c.

Giant Bridesmaid—Shades of white shining rose, blotched. Pkt. 15c.

Giant Eros—This grand novelty produces very large flowers of a deep velvety brown color, with a broad golden yellow margin. The back of each bloom has the same broad margin as the front side, while the dark velvety center is shining through. Pkt. 15c.

Giant Golden Queen—A very pleasing shade of golden colored flowers, carried on good length stems. Pkt. 15c.

Giant Madam Perret—A variety of unusually compact habit. The lower petals are pale with rich rose color markings. Pkt. 15c.

Giant Psyche—Not many of the pansy varieties have such a winning appearance as Psyche. The characteristic five velvety, violet blotches are surrounded by a broad white edge. It is an ideal exhibition or market pansy. Pkt. 15c.

Giant Prince Henry—Darkest blue, very large beautiful flower. Pkt. 15c.

Giant Ruby Red—Very large blooms in striking red shades. Pkt. 15c.

Giant White (Purple Eye)—Large well formed flowers with black center. Pkt. 15c.

Giant Yellow (Black Eye)—Large handsome flowers of a rich yellow with black eye. Pkt. 15c.

CHICAGO PARK BEDDING VARIETIES

Cardinal—Rich shade of red. Pkt. 10c.

Golden Gem—Large pure yellow. Pkt. 10c.

Faust (King of Blacks)—Large, well formed, glossy black flowers. The plants are compact and bloom for a long time. Pkt. 10c.

Peacock—Handsome flowers of a rich purple. Pkt. 10c.

White (Black Eye)—Large, well formed flowers with black center. Pkt. 10c.

A & M GIANT PANSY MIXTURES

Masterpiece ("Ruffled Pansy")—A splendid new class. The petals have the appearance of fluted velvet. The colors are rich and varied, and the plants hardy and vigorous growers. Pkt. 25c.

New Giant Orchid Flowering—A beautiful strain in rare shades. A quick bloomer and very fine. Pkt. 15c.

Giant Trimarreau or French Mixed—A very showy class of vigorous compact growth, flowers of an enormous size; finest strain. Pkt. 15c.

Fine Mixed—A splendid mixture for bedding. Pkt. 10c.

TUFTED PANSY

See *Viola Cornuta*.

A & M POPPIES

The different varieties of poppies are always favorites for outdoor display and the cultivation of them being so extremely simple entitles them to a place in every garden. Seed should be sown where the plants are intended to flower, because it is difficult to transplant them with any measure of success.



Poppy Shirley

Double Annual

Eldorado Double Shirley—A new and lovely variety of Shirley poppies in a variety of wonderful colors. Each flower has many full petals giving the double appearance. A bed of these poppies would be a delight to any lover of flowers. Pkt. 10c.

Ranunculus Flowered—This variety of double Shirley was so named because of its resemblance to Ranunculus. It is a lovely flower and keeps well in water if cut before buds are fully opened. Pkt. 10c.

Carnation Flowered Double Mixed—Choice assortment of brilliant colors. Flowers very double and well fringed. The plants grow to a height of four feet and bear immense carnation-like blooms 6 to 8 inches across. Annual. Pkt. 10c.

Peony Flowered Double Mixed—Annual. Immense double globular flowers. Splendid for bedding and massing. Choice mixture. Pkt. 10c.

PASSION FLOWER

A hardy perennial climber, very satisfactory for immense growth, as it will cover a porch or small cottage in one season.

Coerulea Grandiflora—Sky-blue. Pkt. 10c.

Scarlet (Tacsonia)—A beautiful red. Pkt. 10c.

Edulis (Passiflora)—A rampant grower, blossoming freely. The pulp of the fruit is delicious. Pkt. 10c.

PENTSTEMON

Gloxinioides "Sensation"—The large Gloxinia shaped blossoms vary from pure white, pink, rose and crimson to mauve and purple, including many which are beautifully edged. Hardy perennials. Height, 2 feet. Pkt. 15c.

Hybrids Mixed—A free flowering mixture containing many colors. Pkt. 10c.

PLATYCODON

(Japanese Bellflower)

A handsome perennial belonging to the Campanula family. The flowers are bell-shaped and borne freely throughout late spring and summer. They should be planted in well drained loamy soil and allow the flower stalks to die down naturally so that the crown will not be injured. A clear blue and pure white in mixture. Pkt. 10c.

Single Annual Shirley

The most charming poppy in cultivation. The blossoms are bright and showy and include an almost endless variety of colors, from pure white, pink, terra cotta, salmon, chamois and rosy carmine, to brilliant crimson, many of the flowers being beautifully flaked or edged with white.

American Legion—A grand new poppy. The color is brilliant orange scarlet with yellow anthers. The flowers are three times the size of the ordinary Shirley Poppy. They grow about 2 to 3 feet high and should be planted where they are to flower. They give the best effect when grown in masses or beds. Pkt. 15c.

Blue Shades—Grey blue. Pkt. 10c.

Apricot—Deep apricot shades. Pkt. 10c.

Rose Pink—A fine large flower. Pkt. 10c.

Picotee—White cup, scarlet edged. Pkt. 10c.

A & M Shirley—Fine mixed. Pkt. 10c.

Flanders Poppy—The famous poppy of Flanders Field. A single annual of blood red color. Abundant in the fields of Europe. Pkt. 10c.

Glaucum (Tulip Flowered)—Beautiful variety, producing flowers of the most vivid scarlet, effective for beds or masses. Annual. Pkt. 10c.

Double Flowered Poppies

(In Separate Colors)

These flowers are large and double. A very beautiful bed or border may be had by growing any of these separate colors.

Double Rose—Bright rose pink, Pkt. 10c.

Double Vermillion Red—Pkt. 10c.

Double Shrimp Pink—Pkt. 10c.

Perennial Poppies

Oriental Hybrids Mixed—These tall stately Poppies have immense flowers in the most gorgeous colors. Height 2½ ft. Our seed has been saved from the choicest new hybrids. Pkt. 10c.

Nudicaule, Iceland Poppy—A beautiful class of perennial poppies. Sow in March and they will flower the same year. The beautiful large blossoms are borne on wire-like stems above the fern-like foliage, with a great variety of colors. The Iceland Poppy has more lasting qualities, as a cut flower, than any other poppy.

Single Mixed—Pkt. 10c.

Double Mixed—Pkt. 25c.



Phlox

PHLOX DRUMMONDII

One of the most beautiful and easiest grown of our hardy garden annuals. The flowers are produced in large trusses and may be had in many lovely colors. The seed may be sown in boxes and transplanted when danger of frost is over or may later be sown in the open. They make a very effective show when grown in masses or borders.

Large Flowering Grandiflora—A fine type having large heads of bloom and growing 15 inches in height. This variety may be used for cutting.

Scarlet, Yellow Light Rose dark center Lilac with white center Rosy Chamois White.

Mixed. Pkt. 10c each.

Large Flowering Dwarf—This type has the large individual blooms of the Grandiflora but the growth of the plant is compact and dwarf attaining a height of 8 inches. Effective for parkings and low borders.

Fireball (Scarlet)—Mixed. Pkt. 10c.

Star Phlox—A dwarf variety bearing star shaped blossoms in great abundance. Pkt. 10c

Perennial Phlox (Decussata)—A very handsome variety of Phlox quite different from the annual. The individual flowers are large and borne in immense heads on tall stems. They flower during the summer and fall and come up from the old roots in the spring. Seed may be sown in spring or fall. Extra choice mixture. Pkt. 15c.

PORTULACA (Moss Rose)

Beautiful race of dwarf plants for rock work or dry sunny locations, bearing glossy cup-shaped blossoms in brilliant colors. Annual.

Double Mixed—Saved from the finest flowers only, and will produce a large percentage of doubles. Pkt. 15c.

Single Mixed—Large flowers. Pkt. 10c.

PYRETHRUM

Hardy perennials which are easily grown and make handsome plants.

Hybridum Roseum—This variety is a tall vigorous grower and flowers freely. The flowers are daisy-like and the colors vary from rose, pink and cream to white; all have yellow centers. They make very desirable cut flowers, keeping well in water.

Single Mixed—Pkt. 10c.

Double Mixed—Produces a fair percentage of doubles. Pkt. 25c.

Golden Feather—Fine compact habit of growth, with bright yellow foliage, largely used for edgings and ribbon borders. Height, 9 inches. Pkt. 10c.

Cinerariaefolium—Bright green foliage, sturdy upright growth; used for borders and bedding. This is the variety used for making Buhach, the popular insect powder. Pkt. 10c.



Pyrethrum



Salpiglossis

SALPIGLOSSIS

Highly ornamental half-hardy annual with large veined, funnel-shaped flowers; much prized for cutting; very showy in beds or border. A bed of these beautiful plants is one of the most striking features of the garden during June, July and August. Salpiglossis may be had in separate colors as well as mixed and very wonderful effects are possible with either one color or a combination of two or three of these separate varieties.

- Velvety Red—Pkt. 10c.
- Light Blue and Gold—Pkt. 10c.
- Primrose—Pkt. 10c.
- Rose and Gold—Pkt. 10c.
- Scarlet and Gold—Pkt. 10c.
- Violet and Gold—Pkt. 10c.
- Superbissima Mixed—Pkt. 10c.

PRIMULA (Primrose)

Primroses are charming plants which blossom freely during the spring and winter. They are of easy culture and should be sown from March to May and again in July to August for a succession of bloom. All make splendid pot plants and some blossom freely out of doors even during the winter.

Giant Flowered—The beautiful Fringed Chinese and Obconica Grandiflora are large flowered, bloom freely for several months and are one of the very best house plants. We offer only the best seed.

Chinese Fringed Mixed—Pkt. 35c.

Obconica Grandiflora—Pkt. 35c.

Malacoides—A free flowering improved variety of Baby Primrose. They may be planted out of doors or used as pot plants. If planted in August in partial shade they will flower freely during the winter. Flowers a delicate lilac. Pkt. 25c.

STATICE

Sinuata—An everlasting flower which is increasing in popularity. The plants throw large sprays of flowers which may be dried and make fine winter bouquets. It may be planted both in the spring and late summer. The seed should be kept quite moist until germinated.

Bright Yellow—Pkt. 10c.

Blue—Pkt. 10c.

New Rose—Pkt. 10c.

White—Pkt. 10c.

Lavender—Pkt. 10c.

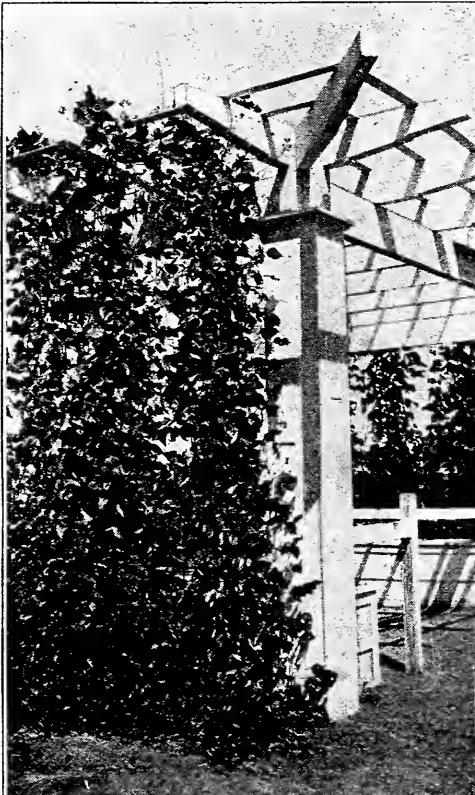
Mixed—Pkt. 10c.

Caspia—A new variety having lovely blue minute flowers borne in long sprays, which is much used to mix with other flowers because of its dainty graceful effect. Is a hardy perennial flowering during the summer and early fall. May be dried as an everlasting flower and becomes white when dried. Seed may be planted in the spring or fall. Pkt. 10c.

Latifolia—This variety produces large branching sprays of minute lavender-blue flowers that are invaluable for cutting. May also be dried and used with everlasting flowers. A perennial. Pkt. 10c.

Perezii—A hardy perennial. The leaves are large and glossy and the flower stalk grows to a height of 2 feet or more above the leaves and is crowned with a mass of small violet blue flowers. This variety is popularly grown among shrubbery and as specimen plants. Pkt. 10c.

Coccinea—This annual variety grows in large sprays of small red flowers. Is attractive both for cutting and as a garden plant. The seed may be sown in the spring or in the fall. Height 2 ft. Pkt. 10c.



Scarlet Runner

SCHIZANTHUS

Very beautiful and interesting annuals. This is one of the easiest annuals to raise from seed. Sow in open where plants are to flower. Exceptionally beautiful when in full bloom and literally covered with small orchid-like flowers.

Grandiflora Mixed—Pkt. 10c.

Rose and Amber Shades—Pkt. 15c.

Wistonensis Excelsior—Exceptionally large flowered mixture. Pkt. 25c.

Retussus—Another type of Schizanthus which has a branching habit, grows 18 inches high and makes a very fine cut flower.

Rose Yellow Blotch—Pkt. 10c.

Lavender Yellow Blotch—Pkt. 10c.

Pink—Pkt. 10c.



Giant French Ranunculus

RANUNCULUS

Giant French Mixed—This very popular flower may be grown readily from seed though home gardeners have usually grown them from bulbs. The seed should be sown in good sandy loam, covered lightly with sand and kept moist. May be planted from early fall to late spring and will flower the first season from seed. Our mixture is a very fine semi-double strain and contains a splendid range of colors. Pkt. 25c.

RICINUS (Castor Oil Plant)

Effective for semi-tropical garden. Easily raised from seed, and should be grown in deep rich soil.

Sanguineus—Blood red stalks and red fruit. Height 8 feet. Pkt. 10c, oz. 25c.

Zanzibariensis—The giant type of the Castor Bean. Foliage varies in shades of color during the different stages of growth. Being a strong grower very suitable as a windbreak. Pkt. 10c, oz. 25c.

Mixed Varieties—Pkt. 10c, or 25c oz.

ROMNEYA COULTERII (California Tree Poppy)

Also well known as the Matilija Poppy; perennial. It is of value as a cut flower, lasting well in the water, and its delicate primrose like perfume is most acceptable. They never lose the crumpled folds that in the case of most poppies betoken newly opened state. Flowers are four to five inches across, pure white, with a fine bunch of yellow stamens, resembling white, single Paeonies. Pkt. 10c.

SCARLET RUNNER

A variety of climbing bean having rich scarlet blooms and most useful for decorative purposes in covering arbors and unsightly structures. The pods are also appreciated as an addition to the vegetable list. Pkt. 10c.



Schizanthus

A & M Improved Strains of Double Flowering Stocks

The Stock is one of the many popular plants used for bedding. For brilliancy and diversity of color, fragrance and duration of bloom it is unsurpassed. Sow the seed in pans or boxes and transplant when large enough to an open, sunny location. Be careful to save the weak and delicate plants as these usually throw the best doubles. It is also a good idea to plant rather thickly so that the single can be weeded out as they appear. Stocks are one of our best winter blooming plants. May be planted from August to March for a succession of winter and summer bloom.



Early Mammoth Branching Nice

Large Flowering Ten Weeks

This dwarf variety is splendid for edging, carpet bedding, borders and cut flowers. The different shades make very pleasing color effects. Height 12 inches.

Light Blue	Canary Yellow	White
Dark Blue	Bright Pink	Blood Red
Lavender	Carmine Pink	Choice Mixed
Peach Blossom, light pink		

Each Pkt. 10c.

RHODANTHE

Maculata Rosea—One of the most attractive everlasting flowers. The flowers hang like little bells on the stems and make a pleasing and dainty cut flower either fresh or dried. Pkt. 10c.

RUDBECKIA

Bicolor Superba—These hardy annuals are of easy culture and produce an abundance of flowers. The flowers have a cone in the center surrounded by yellow and brown petals. These bright flowers are borne gracefully on long stems, and are especially recommended for cutting. Pkt. 10c.

SALVIA (Scarlet Sage)

A tender perennial blooming the first year from seed. They make gorgeous plants, the brilliant red blossoms are borne on long stems in racemes or spikes and are displayed with striking effect against the deep green foliage.

Splendens—Height 3 feet. Pkt. 10c.
Bonfire—Compact bush 2 feet in height. Pkt. 10c.

A & M SCABIOSA

Mourning Bride, Pin Cushion—An annual which is an old garden favorite and which has been much improved recently.

The flowers are large and vary from a lovely light blue to deepest red. They are borne on long graceful stems and produced abundantly from spring until autumn. They are especially recommended for cutting. Sow seed in boxes and transplant or sow in open ground after frost is over, and thin to 15 inches apart. Height 3 to 4 feet.

Azure Fairy—Light Blue.

Black Prince—A deep red almost black.

Flesh Color—A soft flesh pink.

Fiery Scarlet—A brilliant color.

Rose—Soft Rose.

Snowball—Pure white.

Yellow—Light yellow.

Mixed—A mixture of all shades.

Pkt. 10c. each.

Caucasica—A highly decorative perennial variety. Flowers large and of a soft lavender or heliotrope shade. Especially valuable for cutting, lasting a long time in water. Pkt. 10c.

Japonica—A perennial variety from Japan bearing large lavender blue flowers in great profusion. Splendid for cutting. Height 3 ft. Pkt. 10c.

Early Mammoth Branching Nice

This type is excellent for bedding and borders and is splendid for cutting. We offer fine varieties in separate colors and a choice mixture. Height 18 inches.

Giant Abundance—Very large spikes of Carmine Rose flowers. Pkt. 15c.

Giant Almond Blossom—Large white flowers shaded with carmine. Pkt. 15c.

Giant Belle of Naples—A lovely old rose color. Pkt. 15c.

Giant Bright Violet—A rich violet or purple. Pkt. 15c.

Giant Crimson King—Long Spikes, of a rich crimson color. Pkt. 15c.

Giant Golden Sheaf—A new shade, chamois shaded with rose. Very lovely. Pkt. 15c.

Giant Parma Violet—A fine pale violet. Pkt. 15c.

Giant Queen Alexandria—Long spikes of rosy lilac. Pkt. 15c.

Giant Light Blue or Cote d'Azure—Light violet blue. Pkt. 15c.

Giant Silvery Lilac or Empress Augusta Victoria—One of the best. Pkt. 15c.

Giant Canary Yellow or Monte Carlo—Pkt. 15c.

Giant Dark Blue or Summer Night—Pkt. 15c.

Giant Mont Blanc—Pure white. Pkt. 15c.

Giant Beauty of Nice—Flesh pink. Pkt. 15c.

Giant Nice Finest Mixed—Pkt. 15c.

Perpetual Branching

Giant Perfection—This type is of branching habit with long stems, making it very desirable for cutting. The percentage of double is high. Height 2 feet.

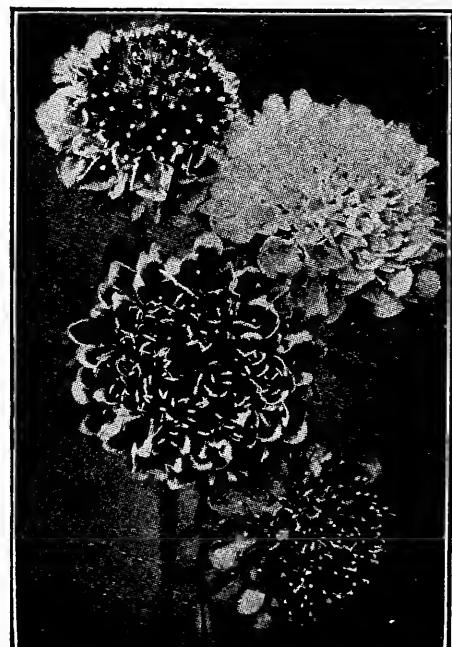
Blood Red—Pkt. 15c.

Rose Pink—Pkt. 15c.

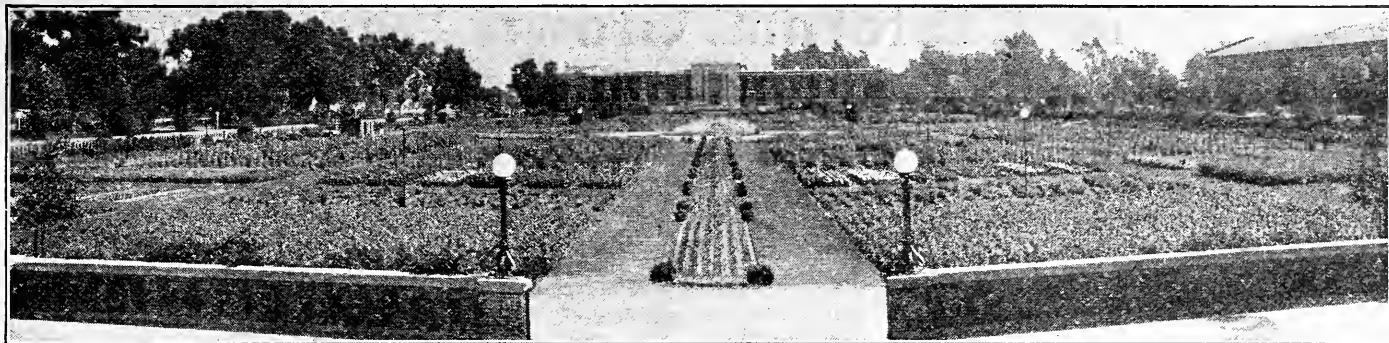
Lilac—Pkt. 15c.

Deep Purple—Pkt. 15c.

Mixed—Pkt. 15c.



Scabiosa



Sunken Gardens at the Exposition Grounds, Los Angeles, Cal.

"Important Notice"

We take pleasure in calling your attention to the seven acre Sunken Garden at Exposition Park, a permanent free exhibit maintained jointly by the City and County of Los Angeles under the auspices of the California Nurserymen's Association. The object of this garden is to demonstrate the great variety of flowering and ornamental plants which can be successfully grown in the open ground at all seasons of the year. A frequent visit to these grounds will be well worth the time of anyone interested in their garden.

SENSITIVE PLANT

An interesting plant, the leaves of which close when touched; elegant foliage; flowers pink. Pkt. 10c.

SHASTA DAISY

See Daisy.

SILENE (Catchfly)

Pendula Compacta—Bright double rose colored flowers produced in great abundance on dwarf compact plants. Very excellent for borders, masses and recommended for carpet bedding on bulb beds. Pkt. 10c.



Sweet William

SWEET WILLIAM (*Dianthus Barbatus*)

A hardy perennial blooming the second year from seed. Grows one to two feet high and bears its flowers in clusters at the end of a stiff stem. The individual flowerets are handsomely colored and marked. It makes a beautiful bedding plant, and is of easy culture.

Single Mixed—Very attractive. Pkt. 10c.
Double Mixed—Pkt. 10c.

Annual Single Mixed—A fine mixture blooming the first year from seed. Pkt. 10c.

SMILAX

A perennial vine which thrives best in a shady location. Very useful for decorative purposes. Pkt. 10c.

SNAPDRAGON

See *Antirrhinum*.

SNAIL VINE (*Phaseolus Caracalla*)

A perennial vine bearing in abundance large clusters of fragrant waxy flowers curiously twisted, so as to resemble a snail. The vine grows about 15 feet high. Pkt. 25c.

SUNFLOWER (*Helianthus*)

Stately, hardy, annuals of easy culture. Useful for background or as a fence and often grown for the seed. Height, 6 to 8 feet.

California Double—Large, massive, bright yellow flowers, height 6 feet. Pkt. 10c.

New Red Sunflower—Is a very apt description of this new variety. The plant is of a freely-branching habit, with well-shaped dark-centered flowers of bright chestnut red, merging to a yellow at the tips of the petals. Height 6 feet. Pkt. 10c.

Mammoth Russian—Is planted largely for seed. It also makes a good windbreak and a very ornamental background. Requires little attention. Pkt. 10c, lb. 25c.

Miniature Mixed—This is a splendid cutting variety of many different colors which blend together beautifully. Pkt. 10c.

Autumn Glory—A recently introduced perennial belonging to the sunflower family. The flowers are about 2 inches in diameter with bright yellow petals and a dark center. The plant grows about six feet tall and branches like a giant cosmos. During September and October each plant is a gorgeous mass of bloom. When the plant has finished blooming cut away the old stalks and in the winter the new growth will start from the old roots again. The seed may be planted in the fall or spring. Pkt. 10c.

STEVIA

Serrata—Small fragrant white flowers borne in large heads which are valuable for cutting. A free blooming perennial of easy culture. Pkt. 10c.

THALICTRUM

Dipterocarpum—A recent introduction from China. The foliage somewhat resembles that of the Columbine and the large feathery heads of rose colored flowers are borne on long stems above the foliage. They bloom through the summer and attain a height of about 4 feet. An excellent perennial. Pkt. 25c.

THUMBERGIA (Black Eyed Susan)

A free blooming annual climber with attractive green foliage. It is also used extensively in hanging baskets, window boxes, etc. The flowers are small in varied colors of yellow, orange and white with black eyes. Finest mixed. Pkt. 10c.



New Red Sunflower

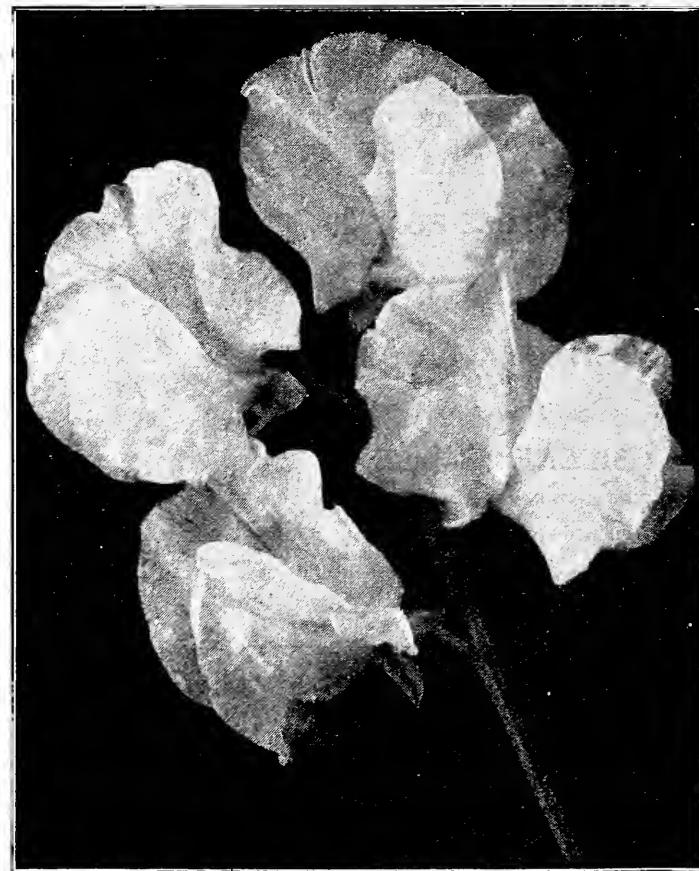
A & M California Grown Sweet Peas

STANDARD GIANT SPENCERS For Spring and Summer Blooming

California now leads the world in the production of high grade sweet pea seed. Hundreds of acres may be seen in solid fields in the sweet pea producing sections of the Golden State, and it is a most beautiful sight to behold. The Giant Spencers listed below are particularly recommended for spring and summer blooming and will thrive in any climate where other sweet peas will grow.

This strain of Sweet Peas bears three and four very large flowers on long stiff stems. Many of the flowers are ruffled and wavy and the great assortment of shades makes them a remarkable strain for all purposes. A & M Sweet Peas have been constantly improved year after year since the original Spencer types were introduced and this year is no exception to the rule. The list of A & M varieties offered below includes every worthwhile shade of the Spencer type for out-door growing. Soil and climatic conditions in California are ideal for the growing of Sweet Peas and a few packets of A & M seed with reasonable cultivation will reward the planter with an abundance of beautiful blooms.

America—White ground, flaked red. Pkt. 15c, oz. 40c.
 Apple Blossom—Rose and blush. Pkt. 15c, oz. 40c.
 Asta Ohn—Lavender. Pkt. 15c, oz. 40c.
 Barbara—Salmon. Pkt. 15c, oz. 40c.
 Blanche Ferry—Pink and white. Pkt. 15c, oz. 40c.
 Blue Monarch—Dark blue. Pkt. 15c, oz. 40c.
 Constance Hinton—Giant white. Pkt. 15c, oz. 50c.
 Countess Spencer—Giant rose pink. Pkt. 15c, oz. 40c.
 Cherub—Deep cream edged rose. Pkt. 15c, oz. 45c.
 Dainty—White, pink, picotee edge. Pkt. 15c, oz. 40c.
 Doris—Soft salmon cerise. Pkt. 15c, oz. 50c.
 Dobbie's Cream—Cream. Pkt. 15c, oz. 50c.
 Elfrieda Pearson—Shell pink. Pkt. 15c, oz. 40c.
 Field Marshall—Deep rich red. Pkt. 25c, oz. 90c.
 Fiery Cross—Orange cerise. Pkt. 15c, oz. 50c.
 Helen Lewis—Orange salmon. Pkt. 15c, oz. 40c.
 Hawlmak Maroon—Finest maroon. Pkt. 25c, oz. 75c.
 Hawlmak Pink—Rose pink, flush salmon. Pkt. 25c, oz. 75c.
 Hope—Soft rose. Pkt. 15c, oz. 50c.
 Illuminator—Orange overlaid cerise. Pkt. 15c, oz. 50c.
 Irish Belle—Lavender and pink. Pkt. 15c, oz. 50c.
 Jack Cornwall—Deepest blue. Pkt. 25c, oz. \$1.00.
 King Edward—Crimson, self color. Pkt. 15c, oz. 40c.
 King Manuel—Maroon. Pkt. 15c, oz. 40c.
 King White—Large pure white. Pkt. 15c, oz. 40c.
 La France—Light shrimp pink. Pkt. 15c, oz. 50c.
 Lavender Geo. Herbet—Clear lavender. Pkt. 15c, oz. 50c.
 Lovely—Rose and flesh. Pkt. 15c, oz. 40c.
 Loyalty—White striped blue. Pkt. 15c, oz. 45c.
 Miriam Beaver—Apricot and buff. Pkt. 15c, oz. 40c.
 Mrs. Hugh Dickson—Salmon pink on cream. Pkt. 15c, oz. 40c.
 Mrs. Routzahn—Apricot and pink. Pkt. 15c, oz. 40c.
 Mrs. Tom Jones—Best azure blue. Pkt. 15c, oz. 50c.
 Picture—Deep La France pink. Pkt. 25c, oz. 75c.
 Queen Alexandria—Scarlet. Pkt. 15c, oz. 40c.
 Rosabelle—Brilliant rose. Pkt. 15c, oz. 45c.
 Robert Sydenham—True orange. Pkt. 15c, oz. 45c.
 Royal Purple—Pkt. 15c, oz. 40c.
 Royal Scot—Scarlet cerise. Pkt. 25c, oz. 75c.
 Senator—White striped maroon. Pkt. 15c, oz. 40c.
 Sunproof Crimson—Pkt. 15c, oz. 40c.
 The President—Orange scarlet. Pkt. 15c, oz. 45c.
 Warrior—Giant Maroon. Pkt. 15c, oz. 50c.
 A & M Spencer Mixed—Pkt. 10c, oz. 30c, lb. \$3.00.



Giant Spencer Sweet Peas

CUPID SWEET PEAS

These Sweet Peas make the most brilliant and showy parkings, beds and low borders imaginable. They make a uniform growth about 8 inches high and each plant is about 1 foot in diameter. The colors are pink, white, red, blue, lavender, etc., and a color scheme may be worked out using the separate colors or the choice mixture may be used. They will bloom freely for several months. The culture is the same as for the climbing variety but for a solid mass plant the rows 15 inches apart.

Pink	Captain of the Blues	White
Red	Othello (Maroon)	Mixed
	Pkt. 10c each, oz. 30c.	Pink and White

SELECTED GRANDIFLORA SWEET PEAS

This is the old hooded type of Sweet Peas which has almost entirely been replaced by the larger waved Spencer. When a brilliant show of flowers is desired more than cut flowers these will be found quite satisfactory. They are delightfully fragrant.

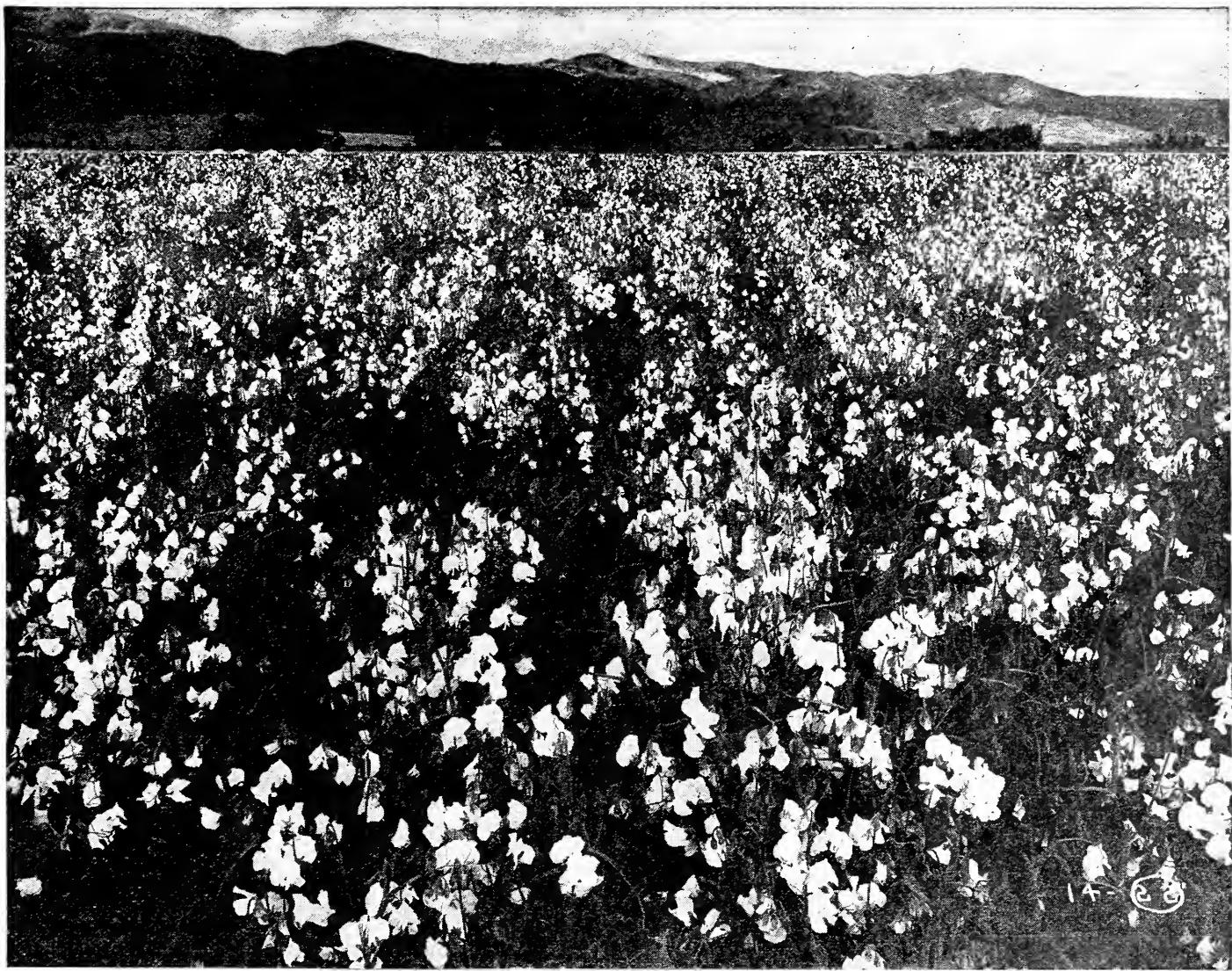
Spring flowering.

Brilliant Blue	Lavender	Pink Edged White
White		Red
Light Blue	Blue Striped	Yellow
Scarlet	Orange	Pink
		Double Choice Mixed
Pkts. 10c each, oz. 20c.		
Choice Mixed—Pkt. 10c, oz. 15c, lb. \$1.50.		

"RAINBOW COLLECTION"

Of Spencer Sweet Peas, put up in seven separate packets. All colors of the rainbow, making a perfect blend. Red, Pink, Orange, Yellow, Lavender, Blue and Purple. The Collection 75c.

A & M Early or Winter Flowering Spencer Sweet Peas



A Field of California Grown A & M Sweet Peas

These are sometimes called Winter Flowering and also Christmas Flowering. The growers class them as early flowering because when planted at the same time as the lates (standards) they will flower at least a month earlier. Because of this early tendency, if planted in August or September they may be brought into bloom in the late Fall and early winter, and for this reason they have been called Christmas Sweet Peas. The planting season is from the first of August until the middle of January. The varieties selected have long stems with three and four blooms to a stem.

These Sweet Peas are used extensively by commercial growers throughout the East for growing under glass. Commercial growers in California grow them in the open without any shelter and have them in bloom throughout the winter.

Amethyst—Royal purple. Pkt. 15c, oz. 90c.

Apricot Orchid—Buff pink. Pkt. 15c, oz. 90c.

Asta Ohn—Lavender. Pkt. 15c, oz. 90c. **Blue Bird**—Light blue. Pkt. 15c, oz. 90c.

Blanche Ferry—Pink and white. Pkt. 15c, oz. 90c.

Bohemian Girl—Deep pink. Pkt. 15c, oz. 90c.

Canary Bird—Deep primrose. Pkt. 25c, oz. 90c.

Columbia—Rose standard with white wings. Pkt. 25c, oz. \$1.20.

Cream—As named. Pkt. 15c, oz. 90c. **Congo**—Maroon. Pkt. 25c, oz. 90c.

Fire King—Orange scarlet. Pkt. 15c, oz. 90c.

Gorgeous—Soft salmon rose. Pkt. 15c, oz. 90c.

Glimmers—Scarlet cerise. Pkt. 15c, oz. 90c.

Grenadier—Dazzling scarlet. Pkt. 35c, oz. \$2.50.

Hercules—Mammoth rosy pink. Pkt. 15c, oz. 90c.

Harmony—Clear lavender. Pkt. 15c, oz. 90c.

Helen Lewis—Orange salmon. Pkt. 15c, oz. 90c.

Illumination—Salmon cerise. Pkt. 15c, oz. 90c.

Mauve Beauty—Rosy mauve. Pkt. 25c, oz. 90c.

Othello—Deep maroon. Pkt. 15c, oz. 90c.

Rose Charm—Large bright rose. Pkt. 25c, oz. \$1.50.

Rose Queen—Rose pink. Pkt. 25c, oz. 90c.

Song Bird—Pale blush pink. Pkt. 15c, oz. 90c.

Spring Maid—Light cream pink. Pkt. 15c, oz. 90c.

Snowstorm—Pure white. Pkt. 15c, oz. 90c.

Torch—Salmon orange overlaid cerise. Pkt. 25c, oz. 90c.

True Blue—Violet blue. Pkt. 25c, oz. 90c.

Wedgewood—Bright blue. Pkt. 15c, oz. 90c.

White Orchid—Pure white. Pkt. 15c, oz. 90c.

Yarrawa—Rose and cream. Pkt. 15c, oz. 90c.

Zvolanek's Rose—Giant rose pink. Pkt. 35c, oz. \$1.50.

A & M GIANT EARLY FLOWERING MIXED

Pkt. 15c, 1/2 oz. 40c, oz. 75c.

WINTER FLOWERING GRANDIFLORAS

These Sweet Peas, if sown in August or September, will be in flower by Christmas. They are fragrant but flowers are smaller than Spencers.

Christmas pink.

Christmas White.

Earliest of all—Pink and white.

Lavender Nora.

Mrs. Alexander Wallace—Lavender.

Mrs. F. J. Dolnasky—Clear pink.

Blue Jay—Violet blue.

Pkt. 10c, oz. 30c, lb. \$3.00.

Best Mixed—Pkt. 10c, oz. 30c, lb. \$3.00.

A & M SELECTED ZINNIAS



New Dahlia Flowered Zinnia

A & M ZINNIAS New Dahlia Flowered

See Page 60 for Special Collections of Dahlia Flowered Zinnias. These flowers are beautifully illustrated on the front cover of this catalog. The picture is a reproduction of an actual photograph and colored by an artist who saw the field. The plants are very sturdy and produce many flowers with stout stems. The flowers in full bloom often measure four inches in depth and six inches in diameter. The flowers differ from other Zinnias in the way the petals turn in toward the center which gives each flower a deep instead of flat appearance, also each separate petal is cupped upward.

The colors range from various shades of yellow and orange through pink, rose, crimson, to purple. As many as twenty colors and shades may be found in this Dahlia Flowered mixture.

Some wonderful new separate colors are offered this year.

Exquisite—One of the most pleasing shades. Color a light rose with deeper rose center. Pkt. 50c.

Golden State—Yellow in bud, turning to a rich orange when in full bloom. Pkt. 50c.

Crimson Monarch—Bright crimson. The largest of the dahlia-flowered type. Pkt. 50c.

Oriole—Immense flowers of orange and gold. Very fine. Pkt. 50c.

Special Dahlia Flowered Mixture

This mixture contains all of the Zinnia novelties and is a most wonderful collection. It will make an excellent garden show and produce fine flowers for cutting. Pkt. 35c.

Dahlia Flowered Mixed

While this mixture does not contain all of the novelties, its color range is very good and will please you. Pkt. 25c.

A & M IMPROVED GIANT ZINNIAS

Marked improvements have been made in the Zinnia during the past few years, the old types having been almost entirely replaced with giant sorts in pleasing colors. Planted in the early spring they will bloom in six to eight weeks from planting and will continue throughout the summer and fall. A & M Improved Giant Strains of Zinnias are the result of years of selection. The blooms are of immense size often measuring six to eight inches across and the colors are bright and attractive. Do not confuse these Zinnias with the old time flower of ten years ago.

GIANT DOUBLE STRAIN

This strain is offered in several colors. The individual blooms often measure 5 inches in diameter and the plants are in continuous flower from late spring until well into the fall. An annual which can be grown from seed with a minimum amount of trouble.

Flesh Shades	Orange	Rose Shades
Golden Yellow		Scarlet Shades
Pink Shades		Sulphur Yellow
Purple Shades		White
Apricot Buff		Lavender
Pkts. 15c. each, 1-8 oz. 40c.		
Special Giant Mixed—Pkt. 15c., $\frac{1}{8}$ oz. 40c.		
All colors mixed—Pkt. 10c., 1-8 oz. 25c.		

VICTORY-QUILLED

The petals of this type are peculiarly quilled and twisted. Various shades of Rose and Lilac, which when the petals twist, reflect pleasing autumn colors. Pkt. 25c.

ZINNIA Medium Flowered Type ELEGANS BEDDING ZINNIA

This variety is the most uniform in size of flower and plant. The flowers measure about 2 inches across, have long stems and for bouquets and vase work are both graceful and attractive. A very complete mixture of colors.

Tall Mixed—Height 3 feet.

Dwarf Mixed—Height 2 feet. Pkt. 10c. each.

ZINNIAS Small Flowered Type HAAGAENA (Mexican Hybrids)

Of new introduction, dwarf, the plant carrying small prettily marked flowers. A variety when better known will have a big demand. Pkt. 25c.

LILLIPUT DOUBLE MIXED

Small double flowers. Dwarf compact bushes and profuse bloomer. A good Zinnia for cutting. Pkt. 15c.

A & M Mammoth Verbenas



Verbena Lucifer

Auricula Eyed Mixed

Brilliant colors, each flowerlet having a large, white eye. A beautiful and striking mixture. Pkt. 10c.

A hardy perennial of trailing habit and one of the finest and best known for beds, parkings, etc. The colors are brilliant and varied and the new large flowered strains are handsome as cut flowers. The flowers are fragrant and produced freely throughout most of the year. They will stand much neglect after established, requiring but little water. Plant in seed boxes and transplant to a sunny situation, or may be sown in open ground during warm weather.

Hybrida Giants

A new strain of verbenas with the same characteristics as the mammoth except that each flowerlet in the cluster is much larger. This gives the blooming plant a more brilliant effect.

Lucifer Scarlet—No eye. Pkt. 15c.

Rosea Stellata—Rose pink with white eye. Pkt. 15c.

Violacea Stellata—Deep purple with white eyes. Pkt. 15c.

Hybrida Giant Mixed—Pkt. 15c.

Hybrida Mammoth

Blue—Pkt. 10c.

Defiance Scarlet—Pkt. 10c.

Pink—Pkt. 10c.

Purple—Pkt. 10c.

Yellow—Pkt. 10c.

White—Pkt. 10c.

Firefly—Scarlet with white eye. Pkt. 10c.

Mixed—Pkt. 10c.

VALERIANA

(Garden Heliotrope)

Rubra Mixed—A much prized showy hardy perennial. It bears dense clusters of small heliotrope scented flowers of red or white. Blooms continuously and is easily raised from seed. Pkt. 10c.

VINCA

Rosea (Madagascar Periwinkle)—An attractive and ornamental plant. Very good for bedding and borders. It is free blooming and makes a fine cut flower, all the buds opening in water. It also makes a fine pot plant. Seed may be sown early in spring in seed boxes or in the open ground after danger of frost is over. Flowers are rose, pink and white. Pkt. 10c.

VIOLET

Dark blue. Very sweet smelling and probably the most popular of the Violet odorato strain. Pkt. 10c.

VIOLA CORNUTA

"Tufted Pansies"—The flowers are not so large as regular pansies but bloom so freely that for bedding effect they are unsurpassed. The colors are distinct and they also bloom for a long time.

Blue Perfection—Deep bright blue. Pkt. 15c.

Papilio—Light blue. Pkt. 15c.

Yellow—Pkt. 15c.

Mixed—Pkt. 10c.

WALLFLOWER

Delightfully fragrant flowers growing in spikes similar to stocks.

Annual Single Mixed—A beautiful single variety which flowers during the summer from seed sown in the spring. Pkt. 10c.

Perennial Double Mixed—Handsome double flowers. Should be planted in the fall for spring blooming or early in spring for late summer flowers. A fine mixture of colors. Pkt. 15c.

WILD CUCUMBER VINE

One of the most rapid and vigorous climbers we have. It is invaluable for covering unsightly places and fences. Pkt. 10c.

WISTERIA

An extremely graceful climber. For trellis and arbor work no other vine can surpass it. Grows readily from seed but plants do not make rapid growth or bloom until well established. Blue or White. Pkt. 10c each.

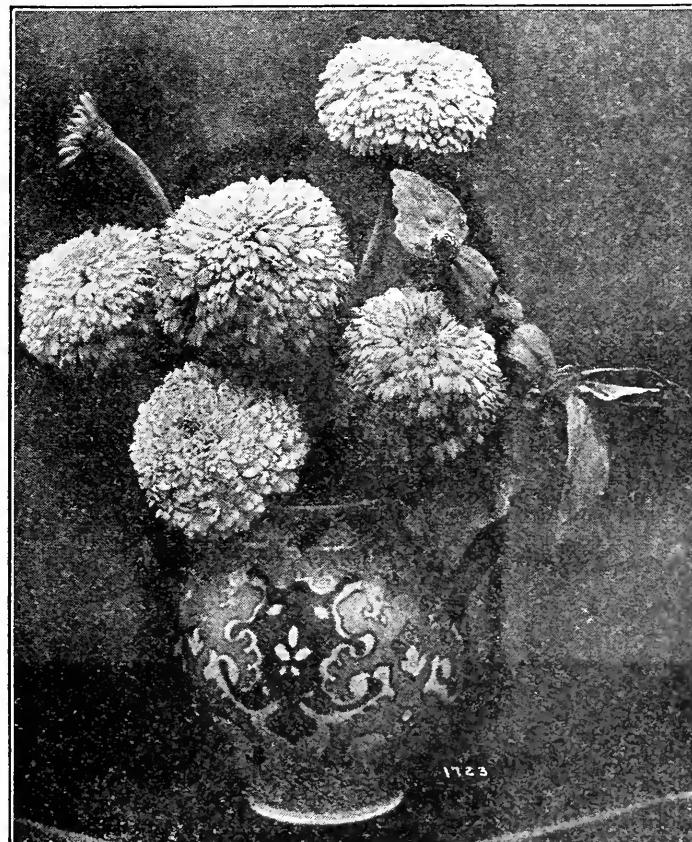
XERANTHEMUM

Double Mixed—One of the most attractive and satisfactory everlasting flowers. The flowers are white, purple, yellow and rose and are pretty in the garden or dried. Plant in the open ground in a sunny situation after frost is over. Pkt. 10c.

CALIFORNIA WILDFLOWER MIXTURE

A splendid mixture of true California annual wild flowers so blended as to give a succession of bloom from early spring to mid-summer. All colors may be found in this mixture. For best results the seed should be sown in a prepared seed bed. They may be planted from fall to early spring—a longer bloom resulting from the fall planting.

If you have a piece of ground you cannot irrigate, or have not time to give particular attention, yet you want to have something beautiful instead of unsightly weeds, we advise you to plant our California Wild Flower mixture. It contains twenty distinct species of wild flowers. One pound of seed is sufficient to plant an acre. Pkt. 10c, oz. 50c, $\frac{1}{2}$ lb. \$3.00.



Giant Picotee Zinnia

GIANT PICOTEE ZINNIA

This very attractive novelty has taken well among the flower fanciers. The bronze, yellow, pink and crimson shades are well marked with Gold Picotee on the edge of petals. Pkt. 25c.

Picotee Golden Pheasant—A new variety. A golden color with edges marked in an attractive shade of bronze; 2 to 3 feet high. Pkt. 25c.

TREE AND SHRUB SEEDS

Most tree seeds should be planted during the winter and early spring months. Pine and Conifer seeds in March and April. Sow in boxes of well drained soil and keep in a protected place. A lath house is the best. Water in the morning to prevent seedlings from "damping off." When about two inches high, pot up and grow in pots until large enough to set out.

ACACIA—Soak seed in hot water 12 hours before planting.

A. Baileyana—30 ft. The most popular. A fast grower with glaucous green foliage. Pkt. 10c, oz. 45c.

A. Cultiformis—"Knife-leaved" Acacia. A fine shrub with glaucous green leaves. Height 15 ft. Pkt. 15c, oz. 50c.

A. Dealbata—40 ft., "Silver Wattle" finely cut foliage. Good for street planting. Pkt. 10c, oz. 45c.

A. Decurrens—50 ft., "Green Wattle." A rapid grower. Can be used as wind-break and is valuable for turner's work. Is rich in tannin. Pkt. 10c, oz. 45c.

A. Floribunda—30 ft. A pretty tree of pendulous habit, quick growth and constantly in bloom. Pkt. 15c, oz. 50c.

A. Latifolia—30 ft. "Golden Wattle." Ornamental; leaves long and rather broad. Does well on the coast. Pkt. 10c, oz. 45c.

A. Lopantha—30 ft., "Crested Wattle." Rapid grower and useful for temporary shelter. Grows in poor soil. Pkt. 10c, oz. 15c.

A. Melanoxylon—75 ft. A compact tree useful for street planting. Wood used in cabinet work. Pkt. 10c, oz. 45c.

ACER MACROPHILLUM—"California Maple," 75 ft. A native deciduous tree. Leaves large. Beautiful in autumn. Pkt. 10c, oz. 25c.

CALLISTEMON RIGIDUS ("Bottle Brush")—A graceful tree or large shrub with drooping branchlets. The leaves are narrow, pointed and rigid. Flowers in bottle brush like spikes of deep red. Succeeds with little care. Pkt. 15c, 1/4 oz. 50c.

CAMPHORA OFFICINALIS—"Camphor Tree," 30 ft. An ornamental and attractive tree with shiny green foliage. Pkt. 10c, oz. 25c.

CASSIA ARTEMISIODES—Shrub. Soft, gray-green, finely-cut foliage. Deep yellow, sweet scented flowers. Stands drought. May be used for hedges. Pkt. 15c.

CEDRUS DEODARA—A beautiful evergreen of silvery green foliage, pyramidal form and drooping branches. Pkt. 15c, oz. 60c.

CERATONIA SILIQUA—"St. John's Bread" or "Carob Tree." A very ornamental compact growing tree. Thrives in any soil and will withstand drought. The leaves are a dark, glossy green. Pkt. 10c, oz. 25c.

COTONEASTER PANNOSA—Shrub of upright growth, small branches drooping. Leaves green above, silvery beneath, White flowers followed by red berries in the fall. Pkt. 10c.

CALIFORNIA CHERRY (*Cerasus Illicifolia*)—A bush or small evergreen tree, very ornamental with shiny, green holly-like foliage. The flowers grow in racemes and are followed by large, red cherries. A handsome shrub and extensively used for hedges. A native of California. Pkt. 10c, oz. 15c, lb. \$1.50.

CATALINA CHERRY (*Cerasus Integifolia*)—A native of Catalina Islands. Similar to the preceding but the leaves are larger and less spiny and the fruit larger. Pkt. 10c, oz. 15c, lb. \$1.50.

CRATAEGUS PYRACANTHA ("Evergreen Thorn")—A thorny, thick-growing shrub with small leaves. The white flowers are followed by orange scarlet berries, making the plant beautiful during the winter. Pkt. 10c.



Eucalyptus

CRATAEGUS CRENULATA—Similar to the preceding but has smaller, rounder leaves and the berries are red. Pkt. 10c.

CRATAEGUS YUNNANENSIS—A low-growing, squat variety coming from Japan. The berries are very bright red and borne in great abundance. A handsome, rare variety. Pkt. 10c.

CRYPTOMERIA ELEGANS—"Fine leaved Japan Cedar." Fine foliage which turns red in the winter. A beautiful tree for the lawn. Pkt. 15c, oz. 50c.

CYPRESSUS MACROCARPA—"Monterey Cypress," 75 ft. Native of California. Extensively used for hedges and windbreaks. Pkt. 10c, oz. 30c.

C. SEMPERVIRENS—"Italian Cypress." A long-lived narrow tapering tree. Used in landscape gardening. Pkt. 10c, oz. 60c.

C. ARIZONICA ("Arizona Cypress")—One of the best cypresses, with a bluish cast to the foliage. Has a slender, upright growth and will thrive in almost any soil, standing both heat and cold. Pkt. 10c, oz. 50c.

ESCALLONIA MONTEVIDIENSIS—Attractive, evergreen, erect shrubs growing in almost any ordinary soil. Of very free flowering habit. White flowers in loose terminal clusters. Pkt. 15c, 1/8 oz. 50c.

ESCALLONIA ROSEA—Similar to other Escallonias except the flowers are pink. Pkt. 10c, 1/8 oz. 50c.

ESCALLONIA RUBRA—Height 4 feet. Similar to the preceding. Leaves shiny green above and dull beneath. Flowers dark red. Pkt. 10c, 1/8 oz. 50c.

ENGLISH LAUREL (*Prunus Laurocerasus*)—One of our handsomest evergreen shrubs. Is effective where ever planted. Broad leaves, leathery and glossy. Small white flowers in clusters. Seed very slow in germination. Pkt. 10c.

EUCALYPTUS

Should be sown in June or July in thoroughly prepared seed boxes. The beds should be kept moist at all times and watered only with a very fine spray. When seedlings appear water only in the morning to prevent damping off. The seedlings should be transplanted when 2 or 3 inches high, to other boxes or small pots, and should be ready to set out in February and March. One pound produces about 22,000 seedlings.

E. Corynocalyx—"Sugar Gum," 100 ft. This variety is the most drought resistant of all, but will not stand much frost. Wood hard. Pkt. 15c, oz. 75c.

E. Ficifolia—"Scarlet Flowering Gum." The best of the red flowering varieties. 25 seeds 25c.

E. Globulus—"Blue Gum." Most rapid grower and best known species. Grows well along coast. Wood is durable and also good fuel. A profitable tree to grow. Pkt. 15c, oz. 75c.

E. Rostrata—"Red Gum." A very tall variety. Withstands extremes of heat and cold. Grows most quickly in the hot sections. Is durable and useful for railway ties, etc., and also for cabinet work. Pkt. 15c, oz. 50c.

E. Rudis—"Desert Gum." Very valuable for hot arid sections. Wood durable. Good for street planting. Pkt. 15c, oz. \$1.00.

E. Tereticornis—"Forest Red Gum." Considered the best for general timber purposes. Grows well in hot and cold sections. The wood is unsurpassed for durability. Pkt. 15c, oz. 75c.

E. Viminalis—"Manna Gum." A hardy rapid growing variety well suited to exposed situations. The wood is softer than some, but is easier to work and takes a fine polish. Useful also for windbreaks. Pkt. 15c, oz. 75c.

FEIJOA SELLOWIANA or **PINEAPPLE GUAVA**—An attractive evergreen shrub with glaucous foliage and purplish red waxy flowers. The fruit is delicious and may be eaten raw or cooked. A new and unusual plant well deserving a place in our gardens. Pkt. 15c.



Sterculia Diversifolia

TREE AND SHRUB SEEDS—Continued.

GREVILLEA ROBUSTA—“Silky Oak.” A pretty tree with fern-like foliage. Orange colored flowers. Rapid grower and withstands drouth. Pkt. 15c, oz. 75c.

HAKEA LAURINA—An evergreen winter blooming shrub. Leaves long and narrow and the pink flowers are like small round balls. Very hardy. Pkt. 25c.

HAKEA SALIGNA—Similar to the above but the leaves are narrower and the flowers white. Pkt. 25c.

HETEROMELES ARbutifolia (“California Holly”)—A native shrub of California, growing well along the coast or in the hot interior. A decorative plant, especially during the winter when covered with the deep red clusters of berries. Pkt. 10c, oz. 25c, lb. \$2.50.

JACARANDA MIMOSAEFOLIA—30 feet. A fine tree with fernlike foliage, bearing clusters of light blue flowers. Pod contains 30 or 40 seeds. 5c. a pod.

JUNIPERUS CALIFORNICA—“California Juniper.” A small tree with dark green foliage. Pkt. 10c, oz. 25c.

J. Virginiana—Red Cedar, 60 ft. A handsome well known tree. Pkt. 10c, oz. 35c.



Washington Robusta Palm

KENNEDYA OVATA ALBA—Low-growing, spreading shrub. Leaves oval. Flowers very attractive, forming a terminal short raceme of pea shaped flower. Pkt. 10c.

KENNEDYA OVATA ROSEA—Similar to the above with rose colored flowers. Pkt. 10c.

KENNEDYA OVATA LILACINA—Similar to other Kennedyas only with lilac colored flowers. Pkt. 10c.

LEPTOSPERMUM LAEVIGATUM—A rapid - growing shrub of drooping, graceful habit, succeeding well in California. Is not particular as to location, growing well in the interior and on the coast. Foliage grayish green and white flowers borne in great profusion. An evergreen. Pkt. 25c.

LIBEOCEDRUS DECURRENS—100 feet. “Incense Cedar.” A fine native tree of compact growth green foliage and red bark. Pkt. 15c, oz. 75c.

LIGUSTRUM NEPALENSE—“Smal Leaved Privet.” An evergreen shrub much used for hedges. Makes a thick, dense hedge, easily trimmed. Pkt. 10c, oz. 25c, lb. \$2.50.

LIGUSTRUM JAPONICUM—“Japanese Privet.” A large shrub with thick, dark green leaves. Like the above, is much used for hedges. Pkt. 10c, oz. 25c, lb. \$2.50.

MELIA UMBRACULTIFORMIS—“Texas Umbrella Tree.” Deciduous. A well known shade tree. Withstands heat. Pkt. 10c, oz. 20c.

MELALEUCA ARMILLARIS—“Bottle Brush.” A large-growing shrub of graceful drooping habit. Leaves are dense and needle like. Flower clusters white, cylindric in form and about 2 inches long. Is hardy and is generally planted in shrubbery borders. Pkt. 15c.

MELALEUCA HYPERICIFOLIA—“Bottle Brush.” A tall-growing shrub, bright green opposite leaves. Flower clusters a rich red. Very showy and one of the best. Pkt. 15c.

MELALEUCA NESOPHYLLA—“Bottle Brush.” Similar to the above but more rapid growing. Flowers soft lavender pink. Pkt. 15c.

PINUS CANARIENSIS—“Canary Island Pine.” A fast growing, robust tree, standing drought well. The foliage is a beautiful glaucous blue color. Pkt. 15c, oz. 50c.

PINUS INSIGNIS—“Monterey Pine.” Native of California, growing well near the coast. Pkt. 10c, oz. 40c.

PITTOSPORUM CRASSIFOLIUM—A tall growing shrub. Gray-green foliage and red flowers. Pkt. 15c.

PITTOSPORUM EUGENOIDES—A large shrub or small tree. Handsome light green leaves and dark stems. Used for specimen plants or hedges. Pkt. 15c.

PITTOSPORUM RHOMBIFOLIUM—Ht. 20 feet. A handsome ornamental tree much used for street planting. Flowers white and followed by orange yellow berries lasting during the winter. Pkt. 25c.

PITTOSPORUM TOBIRA—A low-growing shrub with dark green leaves and fragrant pure white flowers. Pkt. 15c.

PITTOSPORUM UNDULATUM—(Wavy leaved.) Height 10 feet. A shrub or small tree which may also be used for hedges. Deep green, glossy leaves. Flowers fragrant at night. Pkt. 15c.

PITTOSPORUM VIVIDIFLORUM—A shrub with shiny green leaves and green flowers followed by yellow berries during the fall. Very fast growing and especially recommended. Pkt. 25c.

PLUMBAGO CAPENSIS—A spreading or climbing shrub with clean, smooth, light green foliage. Flowers pale blue, phlox-like in shape. Very free flowering. Pkt. 10c.

SCHINUS MOLLE—“Pepper Tree.” A graceful well known tree with fine foliage and red berries. Pkt. 10c, oz. 25c.

SEQUOIA GIGANTEA—“California Big Tree.” The tallest of all trees. A beautiful pyramid tree. Pkt. 15c, oz. 90c.

S. SEMPERVIRENS—“California Redwood.” A fast growing native tree with reddish colored wood. Ornamental. Pkt. 15c, oz. 50c.

SOLLYA HETEROPHYLLA—“Australian Blue Bell.” A hardy evergreen climber or may be used as a spreading shrub producing many brilliant blue bell shaped flowers. Will grow in partial shade. Pkt. 10c.

STERCULIA DIVERSIFOLIA—“Victorian Bottle Tree.” A fine tree for street planting. Glossy green foliage which varies in shape. Pkt. 15c, oz. 50c.

SWAINSONIA ROSEA—Shrub of rather spreading growth. The flowers resemble sweet peas though not fragrant and are borne in long erect sprays, are much used for cut flowers. Starts flowering early in the spring. Flowers rose pink. Pkt. 10c.

SWAINSONIA RUBRA—Similar to the preceding only the flowers are red. Pkt. 10c.

THUYA OCCIDENTALIS—“American Arborvitae.” A good tree for planting in Lawns. Bright green foliage, turns bronze in winter. Pkt. 10c, oz. 40c.

T. Orientalis—“Chinese Arbor Vitae.” A small growing tree. Bright green flattened foliage. Pkt. 10c, oz. 25c.

THUYA ORIENTALIS AUREA—“Golden Arborvitae.” Similar to the above. The foliage beautifully tinged with gold in the spring. Pkt. 10c.



Phoenix Canariensis Palm

PALM

All varieties may be sown in the open ground in mild climates except Cocos Palms. These latter require artificial heat. Some germinate quickly, others take as long as six weeks. Palms grow best in a well drained sandy loam.

CHAMAEROPS EXCELSA—“Windmill Palm.” Leaves fan shaped, and deeply cut. The hardest palm we have, a fine lawn palm. Oz. 15c, lb. \$1.50.

COCOS AUSTRALIS—“Pindo Palm.” A very ornamental palm with glaucous green leaves. Quite hardy. 10 seeds 15c, 100 for 75c.

COCOS PLUMOSA—A tall graceful palm, a rapid grower and a splendid variety for street planting. 10 seeds 20c, 100 seeds \$1.25.

ERYTHEA EDULIS—“Guadalupe Palm.” 30 ft. A rapid growing variety. Fan

shaped leaves of dark green. 10 seeds 15c, 100 seeds \$1.00.

PHOENIX RECLINATA—A graceful palm large and withstands cold. 10 seeds 15c, 100 seeds \$1.00.

P. CANARIENSIS—“Canary Island Palm.” The most graceful and the handsomest of our hardy palms. Leaves pinnate and a green color. One of the most effective for lawn planting. 15 seeds 10c, 100 seeds 35c.

SEAFORTHIA ELEGANS—One of the most beautiful for conservatory or protected gardens. Quite hardy. 10 seeds 15c, 100 seeds \$1.00.

WASHINGTON FILIFERA—The well known California Fan Palm. Grows 60 to 80 feet. Always a bunch of leaves hanging close to trunk. Oz. 10c, lb. \$1.00.

WASHINGTON ROBUSTA—A hardy Fan Palm. Leaves dark green without any threads. Pkt. 10c, oz. 25c.

FRUIT AND NUT TREES

BITTER ALMOND—Per lb. 30c, postpaid.

MYROBOLAN PLUM—Per lb. \$1.00.

CALIFORNIA BLACK WALNUT—Per lb. 15c, prepaid.

APRICOT—Per lb. 20c postpaid.

PEACH—Per lb. 15c, postpaid.
Write for quantity price on the above.

WILD SOUR ORANGE—Write for price.
Delivery January to April.

A & M Selected Dahlias

ORDER EARLY

Dahlia bulbs are ready for shipment about March 1st. You may include them in your order for seeds and they will be sent when ready. We do not advise ordering these after May 15th.

Our offerings of Dahlias are only those varieties which we have found to be entirely satisfactory to planters in general. There are hundreds of worthless varieties with which the amateur is not familiar, and would consequently have more difficulty in choosing properly if they were included among the listings. You may have no hesitancy in selecting any variety from this list as they are all good and popular types.

DAHLIA CULTURE

The Dahlia should be planted in an open sunny location at all times except when flowers are being produced for exhibition purposes in which case, partial shade is preferable. It is not particular as to soil although soil may to some extent govern the type of plant and time of blooming.

In preparing the soil it should be cultivated 8 to 10 inches deep and thoroughly pulverized to secure the best results. An application of A & M Lawn and Garden fertilizer mixed with the soil before planting will assist in producing perfect plants and frequent application during the growing period will bring out the delicate shades of the georgeous flowers.

The time of planting Dahlias varies according to locality. Since they are very tender they should not be planted until after danger of frost is over and the soil has become warm. Planting in cold, wet soil very often decays the tuber.

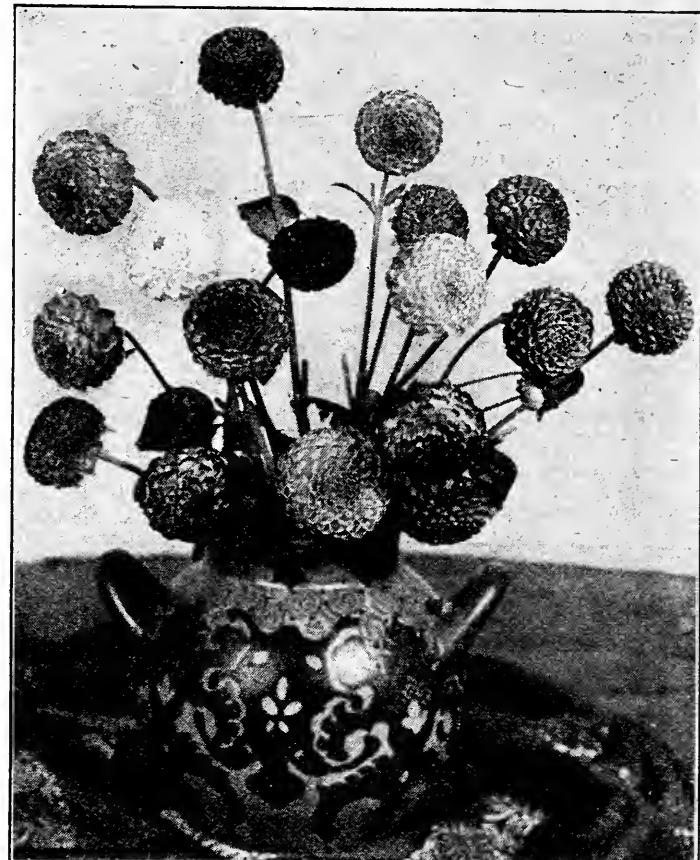
Plant them in hills about 3 feet apart each way. Lay the bulb almost flat and cover six inches deep. Standing the bulb on end encourages surface roots and may result in the plant being affected by heat whereas if they are planted six inches deep they are in cool, moist soil during the hot weather which condition is ideal for them. In planting the bulb, cover an inch or so then, apply sparingly, A & M Lawn and Garden fertilizer or A & M Plant Food and finish covering the bulb with soil. By doing this the plant will receive the benefit of fertilization more quickly and as the root system grows it will feed on the fertilizer which is placed in the soil at the time of preparation.

CARE OF PLANTS

The young plants should be thoroughly cultivated each week. Deep cultivation at first and shallow as the new tubers and tiny roots begin to form. Do not cultivate deep during the blooming period as there is danger of breaking roots and bulbs which will disturb the plant and effect the bloom. Keep the soil in good growing condition by frequent and thorough watering. Constant surface sprinkling encourages surface roots and soft growth, therefore when watering the Dahlia be sure that the ground is thoroughly soaked to a depth of a foot or more then stir the surface soil as soon as it is dry enough and you have a good growing condition. The size of the tuber does not in any way designate the size or quality of the flower. Some varieties produce very small bulbs while others are large, but the results are equally as good from small tubers as from large ones and frequently the best and most effective plants are produced from the small tubers.

KEEPING CUT BLOOMS OF DAHLIAS

The flowers should be cut in the early part of the day if possible. Fill a receptacle with water as hot as can be borne by ones hand and place the stems in it, their entire length to the foliage allowing them to remain until water cools, then transferring them to cold water in the usual manner. On varieties with hard, wiry stems water near the boiling point may be used without injury.



A & M Pompon Dahlias

POMPON DAHLIAS

Postage prepaid on all orders of \$2.00 or more; on all orders for less amounts, add 15c for packing and postage.

These are the babies in the Dahlia world. Pretty, compact flowers of the show type are borne on long, stiff stems holding the blossom upright and making a most wonderful display of color in garden or vase. No garden in California should be without Pompons. They are so different and so dainty. The bulbs multiply the same as other Dahlias and may be divided each season.

	Each
Adelaide—Delicate blush-edged lavender .....	.50
Amber Queen—Lovely shade of amber.....	.35
Annie Doncaster—Soft yellow-edged mauve.....	.50
Dagmar—Maroon .....	.50
Daisy—Salmon pink .....	.50
Dorris—Cream .....	.50
Dewdrop—White tipped lavender .....	.35
Glow—Old rose .....	.50
Ideal—Best yellow .....	.50
Joe Fette—Pure white .....	.50
Little Beeswing—Red shading to yellow.....	.50
Little Bugler—Purple .....	.50
Little Johnnie—Deep crimson .....	.50
Nerissa—Rose tinted silver .....	.50
Neatness—Salmon pink, cream center.....	.50
Nellie Fraser—Lavender pink .....	.50
Rosea—Rose .....	.50
Sunset—Orange .....	.35
Sunny Daybreak—Apricot-edged red .....	.50

Named varieties Mixed, our selection—.35 each, \$3.50 per doz.

A & M SELECTED DAHLIAS—Continued.**A & M DECORATIVE DAHLIAS**

Postage prepaid on all orders of \$2.00 or more; on all orders for less amounts add 15c for packing and postage.

The Decorative type of Dahlia is a large double flower, full to the center. Broad flat petals with broad points or rounded tips. They flower freely on long stems and are a popular type for garden show or for cutting purposes.

Abalone—One of the most popular of the pink shades. It is a beautiful shell pink, flowers about five inches in diameter, good stems and a free bloomer. **Each 35c.**

Barranca—One of the best yellow varieties in the decorative class, being a clear, bright yellow, of pleasing appearance. **Each 50c.**

Beauty of Rosemont—Large flowers of rose pink with buff shadings, blending into a beautiful combination of shades. A good cut flower. **Each 50c.**

Carolyn Wintjen—Salmon pink, shaded to rose. Large flowers held erect on strong stems. A profuse bloomer. **Each \$1.50.**

Champagne—Autumn shades, from burnished copper to chamois. One of the finest of the new varieties. The flowers are large and very double, each petal has a satin sheen. The plants are vigorous and the stems strong. **Each \$7.50.**

Dr. Tevis—Salmon rose, suffused with gold shading to apricot. A large flower with excellent stems. **Each \$1.00.**

Duzon—A popular variety for cutting. A brilliant orange red, full to the center. Plants are sturdy and free blooming. **Each 50c.**

Earl Williams—The large size and fullness of this variety makes it one of the finest. In color a rich brilliant crimson and white. The blossoms are borne well above the foliage on good stiff stems. **Each \$5.00.**

Embassador—Dark velvety red or maroon of fine formation. Good stem and habit. **Each 75c.**

Insulinda—A wonderful prize-winning Dahlia. The color a golden bronze overlaid with a sheen of gold. It has strong growth, rich green foliage and flowers profusely throughout the season. **Each \$2.00.**

Jane Selby—A delicate mauve pink flower of immense size and borne on long stiff stems with flowers well up above the foliage. Fine for cutting. **Each \$1.00.**

King of the Autumn—A beautiful buff and terra cotta combination which is highly prized by florists for cut flowers, being of good stem and a fine keeper. King of the Autumn is in demand at all times. **Each 75c.**

Kitty Dunlap—An enormous flower of splendid coloring, American beauty rose, with deeper rose center. A full beautifully formed flower on upright stem. An excellent variety for cutting or exhibition. **Each \$4.00.**

Le Grand Manitou—A very showy and striking variety. A deep purple, splashed and striped with pure white. A prolific bloomer. **Each 50c.**

Mabel Taft—A beautiful apricot, shading to a golden yellow. The flowers are very large, averaging 8 to 9 inches in diameter and full to the center. Fine for garden and exhibition purposes. **Each 75c.**

Mrs. Carl Salbach—A very large and popular variety, in color lavender pink. Long stems and prized for cutting. **Each \$1.00.**

Pride of California—A brilliant glowing cardinal red of very large size, borne on extra heavy stems. Keeping qualities excellent. **Each \$1.25.**

Polar Bear—A large pure white. Long wiry stems and good keeping qualities. **Each \$1.50.**

Rosa Nell—A great prize-winner. An immense deep bloom, in color a pure bright rose. A wonderful Dahlia worthy of having, which is now offered at popular prices. **Each \$1.50.**

**Champagne**

Rockwood—A magnificent decorative of a glorious shade of bright cerise rose. The color, size, stem, and vigorous growth make this one of the finest for cut flowers or exhibition purposes. **Each \$5.00.**

Rosemaure—A rose pink with clear petals of good substance. Always attractive. A strong grower with good stems. **Each 75c.**

Sunshine—A justly popular variety. A bright scarlet, tipped with gold. This is a gorgeous combination and one which attracts much admiration. A profuse, vigorous bloomer. **Each \$1.00.**

Shadow's Lavender—One of the most beautiful Dahlias grown. The flowers are immense and of a lovely silver lavender color, the whole flower having a satin sheen. The stems are strong and hold the flower erect, and the plants are vigorous growers. **Each \$5.00.**

PAEONY

Postage prepaid on all orders of \$2.00 or more; on all orders for less amounts add 15c for packing and postage.

This type of Dahlia has broad, long petals. The flowers are large and full, generally showing the yellow center. They are free blooming and very vigorous growers. Excellent for cutting.

Mrs. Jessie Seal—A paeony flowered old rose, shaded gold. An exquisite combination, and one that is attractive and pleasing. Its habit of growth is ideal for garden and show, and it ranks high in popularity as a cut flower. **Each \$1.00.**

Elizabeth Boston—One of the finest of this type, yet introduced. Immense flowers of a rich, deep crimson with gold tips. The flower has splendid keeping qualities and a fine stem. **Each \$3.50.**

COLLARETTE DAHLIAS

Postage prepaid on all orders of \$2.00 or more; on all orders for less amounts add 15c for packing and postage.

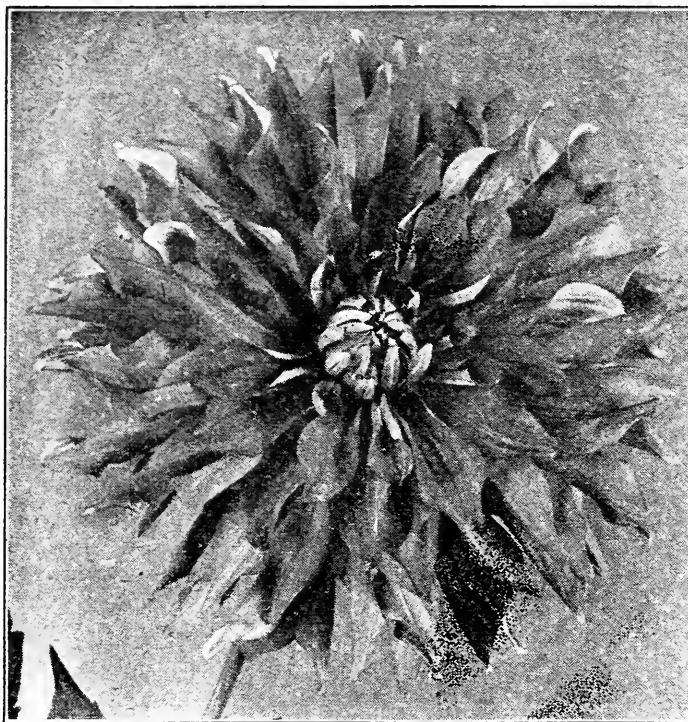
Single open-centered flowers with a circle of smaller, narrower, usually different colored rays, forming a sort of collar between the large petals and the center.

No. 1—Pink and white collar. **Each 50c.**

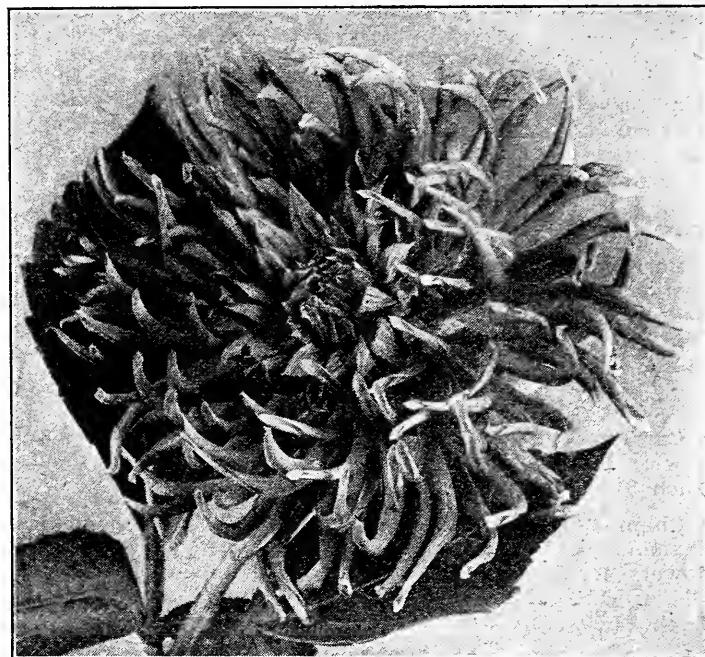
No. 2—Yellow and orange red with yellow collar. **Each 50c.**

No. 3—Blood red and white. **Each 50c.**

No. 4—Bright red and yellow collar. **Each 50c.**

A & M SELECTED DAHLIAS—Continued.

Mariposa



Pennant

CACTUS AND HYBRID CACTUS DAHLIAS

Postage prepaid on all orders of \$2.00 or more; on all orders for less amounts add 15c for packing and postage.

The true Cactus type flowers are fully double, petals long, narrow, incurved or twisted, with sharp, divided or fluted points.

The Hybrid Cactus type flowers are fully double but the petals are shorter than those of the true Cactus type and are broader and more flat, though recurved and twisted. The stems of this type are usually strong and the plants prolific bloomers.

The stems of the true type are often weak and do not hold the flowers erect. We are offering only those with good stems and the best keeping qualities.

Bertha Horn (Hybrid Cactus)—A dainty golden yellow, shading a rich bronze. The plant is of strong upright growth, bearing immense flowers 9 to 10 inches across. The flowers are very double, borne on long stems and keep well. **Each \$1.00.**

Exquisite (Hybrid Cactus)—A soft yellow shading to salmon. A pleasing combination and a valuable addition to any collection. Good cut flowers. **Each \$1.00.**

Gee Whiz (Hybrid Cactus)—A large beautiful Dahlia. Buff attractively blended with salmon. The flowers are well formed and held on erect stems above the foliage. Desirable for cutting. **Each \$2.00.**

George Walters (Hybrid Cactus)—A favorite California introduction, producing excellent flowers of a pleasing salmon color, with shrimp pink shadings. This is a magnificent flower and is highly prized by all who grow it. **Each 75c.**

Golden West (Hybrid Cactus)—This magnificent, large flowering Dahlia has been on the market long enough to be well known and the bulbs sell readily. The color is a yellow and orange buff. The flowers are very double and the stems are good. **Each 35c.**

La Favorita (Hybrid Cactus)—A deep reddish salmon in the center, shading to a pink salmon at the tips. This beauty has several blue ribbons to its credit and is well worthy of them. A good cut flower. **Each \$1.50.**

Magnificent (Hybrid Cactus)—A free bloomer of the lovely combination of buff and rose salmon. Is particularly suited for garden show because of the profusion of blossoms. To produce large flowers it should be disbudded. **Each 75c.**

Mariposa (Hybrid Cactus)—A lovely variety. It is a strong grower and a profuse bloomer. The flowers are very large but their formation has a dainty appearance. In color a silvery pink suffused with lavender. A new variety worth having. **Each \$4.00.**

Moon Glow (Hybrid Cactus)—A perfect flower somewhat star shaped in form and of medium size. A soft yellow ground, deep lavender in center, shading to lilac on tips. Each flower on good stiff stems, splendid keeper. **Each \$2.00.**

Mrs. W. E. Estes (Hybrid Cactus)—This snow white Dahlia with its immense flowers lend a pleasing touch to the garden. The flowers are full double and have good keeping qualities. **Each \$1.00.**

Prima Donna (Hybrid Cactus)—One of the very best keepers. Color a dainty combination of ivory white and lilac. **Each 75c.**

Tom Lundy (Hybrid Cactus)—A prolific bloomer of bright velvety red. Immense flowers measuring from 9 to 11 inches across. A favorite color and a favorite flower. **Each 75c.**

Gladys Bates (Cactus)—An exceptionally attractive combination of tan with rose reverse. Blooms freely on long stems, flower often measuring 7 inches across. **Each \$2.00.**

Mary Purrier (Cactus)—A wonderful Dahlia and a favorite. Large flower, long stiff stems, and a fine bright red. Petals long and narrow. **Each 50c.**

Mrs. Edna Spencer (Cactus)—An attractive California variety with splendid stem and beautiful coloring. Lavender shading to white. **Each 75c.**

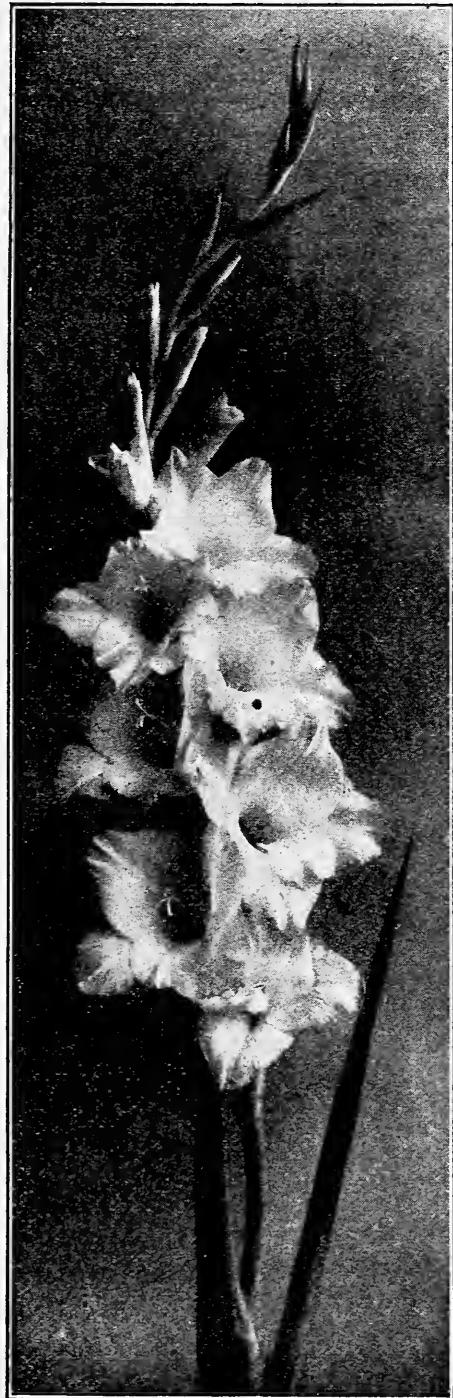
Pennant (Cactus)—A most beautiful shade of clear coral of unusual grace in form of flowers. They have long wiry stems and are excellent for cutting. **Each \$2.00.**

A & M Gladioli

(Ready for shipment December to June)

Gladioli well deserve their unrivaled popularity. They may be planted from January to June for a succession of blooms. Gladioli will repay in full for all extra care and fertilizing. It is well in cutting to separate the leaves from the flower stem, allowing the leaves to remain. When completely dried this top growth should be cut off and the bulbs stored. These bulbs multiply and the bulblets will bloom the second year. The bulbs should be planted about 3 inches deep in any good garden soil, preferring an open sunny situation.

There are many new and wonderful varieties and some of the old ones are still leaders. We have tried to include the best of the new and standard varieties in our list. We are offering two colors and a mixture of Primulinus this season. This type of Gladioli is finding great favor among flower lovers. The flowers are smaller and the stems less stiff than the other Gladioli. The colors vary from cream, yellow and orange to bright red. They are excellent for cutting.



NEW AND RARE VARIETIES

Golden Measure—A large, clear, deep yellow. Extra fine flowers on tall, vigorous stalk. 40c each, \$4.00 per doz., \$24.00 per 100.

American Beauty—The color of an American Beauty rose. Large flowers set close together on a strong stalk. As many as eight flowers open at one time. Each stalk a bouquet in itself. \$1.00 each, \$10.00 per doz.

E. J. Shaylor—A truly beautiful flower. In color a pure, deep rose pink. Each bulb will usually make two tall, erect flower stalks. Many wide open flowers at a time, and very satisfactory as a cut flower. 35c each, \$3.50 per doz., \$20.00 per 100.

Purple Glory—A giant of Kundred origin. The deepest, velvety maroon red. Each flower is beautifully ruffled. If you care for rich colors, this flower will delight you. \$1.00 each, \$10.00 per doz.

Byron L. Smith—Light lavender with cream coloring in throat. Resembles a cattleya orchid. One of the finest. Often throws two flower stalks to a bulb. 35c each, \$3.50 per doz., \$20.00 per 100.

Butterfly—A lovely, ruffled, Primulinus. In color, salmon yellow, flaked with rose, and edged with deep rose. An unusual and charming cut flower. 25c each, \$2.50 per doz., \$16.00 per 100.

Early Sunrise—A large brilliant deep salmon with yellow throat. A very much admired variety, and one of the earliest to bloom in the spring. 25c each, \$2.50 per doz., \$16.00 per 100.

Rose Glory—A very large and ruffled variety. Pure rose pink, with deeper color in throat. A charming addition to any collection. 25c each, \$2.50 per doz., \$16.00 per 100.

Le Marechal Foch—Beautiful shade of light pink. Very large flowers. Early bloomer. 25c each, \$2.50 per doz., \$16.00 per 100.

STANDARD VARIETIES

Alice Tiplady—The most attractive of the Primulinus or butterfly type. The color is a most beautiful orange saffron. Tall graceful spike, and one of the best for cut flowers. 15c each, \$1.50 per doz., \$10.00 per 100.

Baron Hulot—A true violet blue, a smaller flower but vigorous grower and one of the best in this color. 15c each, \$1.50 per doz., \$10.00 per 100.

Evelyn Kirtland—A tall graceful stalk with exceedingly attractive coral-pink blooms. An easy variety to grow and most satisfactory for house decoration. 15c each, \$1.50 per doz., \$10.00 per 100.

Francis King—An old favorite, and very popular still for bright red flowers. 10c each, 75c per doz., \$5.50 per 100.

Grandeur—A deep vermillion pink. Very massive and quite distinctive and beautiful. 20c each, \$2.00 per doz., \$12.00 per 100.

Halley—A large open flower of salmon pink. Blooms early and is a popular cut flower. 10c each, \$1.00 per doz., \$7.00 per 100.

A & M Gladioli—Continued

Herada—Beautiful mauve. To all who admire this color, this flower will be a great pleasure. Graceful stems and wide open flowers add to its attractiveness. 15c each, \$1.50 per doz., \$10.00 per 100.

Ida Van—Fine deep salmon red. A rich and brilliant color. A popular variety and much grown for cut flowers. 10c each, 75c per doz., \$5.50 per 100.

Lily White—Pure white and an early variety. When the flowers are several days old faint lavender markings appear in the throat. 15c each, \$1.50 per doz., \$10.00 per 100.

Mary Pickford—Cream, with throat a soft lemon yellow. A beautiful flower. Is a vigorous grower, often sending two stalks to a bulb. Splendid for cutting. 15c each, \$1.50 per doz., \$10.00 per 100.

Myrtle—One of the best pink Gladioli, being a delicate, arbutus or rose pink color. A vigorous grower, strong stalks, and many flowers open at a time. 15c each, \$1.50 per doz., \$10.00 per 100.

Mrs. Frank Pendleton—One of the grandest varieties. A bright rose pink, with a rich carmine red blotch on the lower petals. Flower stalks tall and erect. A very fine and popular variety for cutting. 10c each, \$1.00 per doz., \$7.00 per 100.

Mrs. Dr. Norton—A delicate pink, with cream throat. A very attractive color combination. Tall erect stem. 15c each, \$1.50 per doz., \$10.00 per 100.

Panama—A fine, bright pink. Is a seedling of America, but brighter in color. A good cut flower and very popular. 10c each, \$1.00 per doz., \$7.00 per 100.

Prince of Wales—A clear, delicate salmon pink. The finest of this color and one we highly recommend. An early variety and very popular for cutting. 15c each, \$1.50 per doz., \$10.00 per 100.

Schwaben—Soft pure yellow, with little red feather markings in the throat. A vigorous grower. 15c each, \$1.50 per doz., \$10.00 per 100.

Virginia—Brilliant scarlet. The most popular red variety. A vigorous grower with erect stalks. Exceedingly attractive for cutting or will give a grand mass of color when grown in beds. 15c each, \$1.75 per doz., \$14.00 per 100.

A & M Primulinus Mixed—A mixture of the finest and best of this type. Especially recommended for cutting. 10c each, 75c per doz., \$5.50 per 100.

A & M Choice Mixture—A complete range of colors including the newer finer sorts. 10c each, 75c per doz., \$5.50 per 100.

Miscellaneous Spring Flowering Bulbs

CANNAS

Cannas have always been in demand and now with the wonderful new colorings and the improved size of flowers, they are even more popular. The large, handsome, ornamental foliage and beautiful spikes of bright flowers make the cannas ideal for mass plantings, backgrounds, borders or hedges. They may now be obtained in heights varying from 3 to 6 feet, and in colors of rose, red, orange, to pure white. Also some foliage is bright green and some a rich bronze. These new orchid flowering and large truss varieties bloom freely for six to eight months. In mild climates they are evergreen, but we recommend cutting away the old stalks in the winter to make room for the new growth. They should be separated every three years. Set the roots 12 to 15 inches apart. They flower more freely in sunny situations but grow well in partial shade, requiring at all times plenty of moisture.

Red Varieties

Colossal—Luxuriant foliage of rich green. Height six feet. The flowers are a bright, rich red and the largest of all. Very striking for a background or center of a group. 25c each, \$2.50 per doz., \$4.00 for 25.

King Humbert—One of the most popular Cannas. Immense orchid flowers of brilliant orange red often streaked with gold. Sturdy bronze foliage. Four to five feet high. 25c each, \$2.50 per doz., \$4.00 for 25.

Uncle Sam—Deep vivid crimson. One of the largest orchid reds. Green foliage. Five to six feet high. 20c each, \$2.00 per doz., \$3.25 for 25.

Scarlet and Gold

Duca De Otranto—A very lovely lily-shaped variety of golden orange, which changes to a glowing carmine. An interesting and wonderfully effective canna to grow. Green leaves. Four to five ft. high. 20c each, \$2.00 per doz., \$3.25 for 25.

Pink Varieties

Hungaria—A fine, clear pink. Flowers large with rounded petals. Dwarf, luxuriant, green foliage. Two to three feet high. 25c each, \$2.50 per doz., \$4.00 for 25.

Wabash—Large fine flowers, borne many in a truss, in color salmon-pink. Rich bronze foliage. Height four feet. 30c each, \$3.00 per doz., \$5.00 for 25.

Orange

Indiana—A bright, vivid orange. Fine shaped flowers in large trusses. Green foliage. Five to six feet high. 20c each, \$2.00 per doz., \$3.25 for 25.

Wyoming—A large, orchid flower of pure, rich orange. Handsome bronze leaves. Four feet high. 25c each, \$2.50 per doz., \$4.00 for 25.

White

Eureka—Full trusses of large flowers, an almost pure white. Very fine grower: green leaves; four to five feet high. 30c each, \$3.00 per doz., \$5.00 for 25.

Yellow

Gold Bird—In color a clear lemon yellow. The flowers are often 5 inches across, the petals being broad and rounded. Excellent green foliage. Three to four feet high. 20c each, \$2.00 per doz., \$3.25 for 25.

CALADIUM (Elephant Ear)

Ready for shipment December to April

A semi-aquatic plant, requiring a warm location and plenty of water. They may be kept growing throughout the year in most localities in this state, but should they be frosted down they will soon make new growth. The large leaves are very ornamental. 25c each.



Calla Elliotiana

CALLA ELLIOTIANA (Yellow Calla)

December 1st to April 1st

One of the most attractive flowers grown, suitable for outdoor bedding or for pot culture. The blossom is large and a deep golden yellow. The leaves are spotted white.

Small size—35c each, \$3.50 per doz.

Large size—50c each, \$5.00 per doz.

CINNAMON VINE (Dioscorea Batatas)

A shiny leaved rapid growing vine growing from a tuber which may be planted from December to spring. It is called Cinnamon Vine because of its clusters of cinnamon scented white flowers. The foliage dies during the winter and the new shoots start early in spring from old tuber. 15c each, 2 for 25c.

SPRING FLOWERING BULBS—Continued.

AMARYLLIS BELLADONNA

"Belladonna Lily"—A beautiful rose pink lily which may be used for bedding, borders or cut flowers. This is sometimes called the Resurrection Lily, because its foliage dies down during the summer and then the flower stalk appears, the new foliage appearing in early fall. We have these only until the 1st of March. Small—15c each, 3 for 35c. Medium—20c each, \$2.00 per dozen. Large—25c each, \$2.50 per dozen.

ANTIGONON LEPTOPUS

Called Queen's Wreath and Rosa de Montana. A rapid growing and lovely vine with heart-shaped leaves and bearing quantities of rose pink flowers in wreaths. Blooms in the summer and fall. A vine which will thrive in hot, sunny situations and if cut down by frost will come up again in the spring. Each 75c.

BEGONIA
(Tuberous Rooted)

Ready about January 1st

These are very satisfactory as summer bloomers. For outside beds, plant in a shaded location, covering the bulbs about one-half inch deep. Water lightly until growth starts. After the foliage has died down in the fall, lift them and store in dry sand. Tuberous Begonias make very good pot plants. Use a five-inch pot for each bulb filled with rich sandy loam and give the plants light but not direct sun. No bulb is more satisfactory for pot culture.

Single Pink, Scarlet, Orange, White. 35c each, \$3.50 per doz.

Double Salmon, Scarlet, Yellow, Pink. 50c each, \$5.00 per doz.



Lilium Auratum

GLOXINIA

Ready for shipment Jan. and Feb. One of our handsomest summer blooming, tuberous-rooted plants. It makes a very fine pot plant, requiring about the same cultural directions as Begonia. One bulb to a 4-inch pot. The colors range through pink, scarlet, violet and white bordered. We are able to offer them in mixture only. 45c each, \$4.50 per doz.

One lady in this city sold from her small home garden \$70 worth of cut flowers from August 1st to November. It also afforded pleasant pastime and healthful recreation. Now is the opportune time.

Read next page.

LILIES

Lilies deserve a place in every garden. They are beautiful, fragrant, and require little care except in planting. They should be planted eight to ten inches deep in soil which has been mixed with well rotted manure and sand. Lilies should not be disturbed. If planted in pots, observe same conditions, only covering to a depth of one inch. The pots should be plunged in soil and not watered until growth appears.

LILIUM AURATUM

January 1st to March 1st

Gold Banded Lily of Japan. Flowers white, spotted crimson, with pure gold band running through center of each petal. Very fragrant and the most beautiful of all Japanese lilies. 35c each, \$3.50 doz.

LILIUM RUBRUM

January 1st to March 1st

"Red Japan Lily"—Flowers white, shaded and spotted with crimson, very fragrant. One of the best for cut flowers as the flowers do not all open at once. 35c each, \$3.50 doz.

HARDY IRIS

"Sweet Flag or German Iris"—This class of plants is becoming increasingly popular. They thrive in almost any soil or situation, growing well in shady places. They also require very little attention, but care should be taken that they have moisture in the summer or the leaves will burn and the plant will be retarded in its growth. The best time for dividing old clumps or setting new bulbs is the fall. The named varieties listed below will produce beautiful orchid-like blooms of large size and delightful fragrance.

Named Varieties

May Queen—Soft Rose, very unusual. 35c each, \$3.50 doz.

Catarina—Light blue and lilac, immense blossoms, long stems. 35c each, \$3.50 doz.

Yellow—35c each, \$3.50 doz.

Freya—Pearl Violet. 35c each \$3.50 doz.

Agnes—White fringed lilac. 35c each, \$3.50 doz.

Delicatissima—White frilled, with lilac. 35c each, \$3.50 doz.

Florentine Blue—Azure blue (Orris Root) 35c each, \$3.50 doz.

Florentine Alba—Silver white (Orris Root) 35c each, \$3.50 doz.

Mrs. H. Darwin—White and violet. 35c each, \$3.50 doz.

Delmatica—Light blue, huge blossoms. 35c each, \$3.50 doz.

Innocenza—Purest white, large. 35c each, \$3.50 doz.

Stylosa—Lilac blue, earliest bloomer. 35c each, \$3.50 doz.

Lohengrin—Chinese blue. 35c each, \$3.50 doz.

Lorelei—Fawn and yellow. 75c each.

Arnois—Bronze. 75c each.

Common Varieties

Light Blue 50c doz.

Purple 50c doz.

White 50c doz.

LILY OF THE VALLEY

These dainty little flowers are too well known to need description. We have the Lily of the Valley pips during December, January and February. If planted in a shady situation in a bed composed of leaf mold and sandy loam, they may become naturalized. Care must be given them during the summer and they should be separated every 3 years. 10c each, \$1.00 per doz.

MADEIRA VINE

(Also Called Mignonette Vine)

A popular vine with round, glossy leaves growing from a tuber. Is much used for covering fences, porches, etc. A heavy frost will kill the foliage, but new growth will start again readily from the roots. Has small white fragrant flowers. Should be planted during the winter months. 10c each, \$1.00 per doz.



Mexican Everblooming Tuberose

TUBEROSES

(Mexican Everblooming Tuberoses)

The most fragrant of all tuberoses and a wonderful bloomer. Flowers are pure white and clustered from six to a dozen on stiff stems, making them excellent for cut flowers. The bulbs of these multiply from year to year, producing great masses which should be separated and transplanted every three years. They are very hardy and will grow and bloom in the warm inland valleys equally as well as on the coast. A dozen bulbs will plant a row six feet long. 10c each, 75c doz.

Excelsior Double Pearl—This variety is grown largely for its individual flowers which are large and double. The spikes are dwarf and full flowered. The culture is the same as for the Mexican variety. 10c each, \$1.00 per doz.

Listen in at 12:30 noon each Wednesday!

Tell your neighbor to ask for this catalog.

While your boys and girls are learning agriculture in school, encourage them to grow in the home garden some flowering bulbs, and cut flowers for the market.

It will afford both agricultural and business training for them; also, clean wholesome exercise.



F. C. McNabb

ALWAYS UP-TO-DATE

For thirty years, during which time we have issued the annual Aggeler & Musser Seed Co.'s catalog, we have always endeavored to fill its pages with useful garden and agricultural information.

By this catalog we have during the past year reached probably more than 200,000 people.

To us this was very gratifying for we have reason to believe the information has been of great service to many.

Pursuant to the policy of the Los Angeles "Times" of broadcasting through their studio KHJ the very best of everything whether it be music, science or practical education, probably more than 1,000,000 "listeners in" are now receiving every Wednesday at 12:30 noon, agricultural and home garden instructions by Mr. F. C. McNabb.

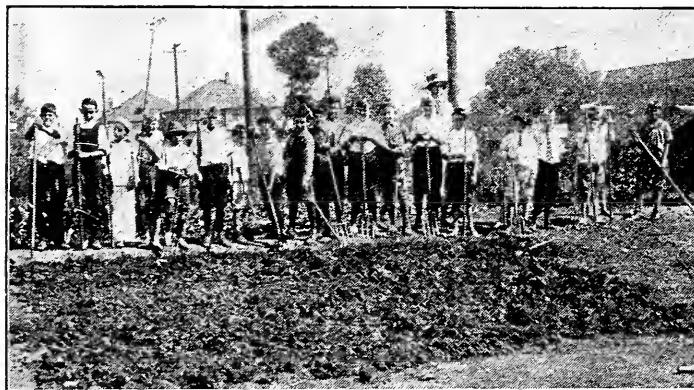
Mr. McNabb is a director of the Aggeler & Musser Seed Co. and manager of their retail store at 750 South Spring Street.

We here present his picture that you may see the man who talks to you over the radio.

Never Before Was There Such Necessity For a Home Garden

Never was there greater need. We are accustomed to depend upon aliens to produce our vegetables, but suddenly this source of supply is entirely eliminated. For a while it will not be a question of price but of supply. The quickest solution is a home garden. This is no false alarm—he who heeds will be wise.

When our boys were called to arms in 1917 our schools had already made a good start toward preparing the younger generation to be producers of food. We here re-print the following from our 1918 catalog:



Beginners, November 1917



Graduates, June 1917

Thanks to the very commendable work of agriculture now directed at the public schools throughout the country, we look to see better conditions prevail in the homes.

Many a capable man with good intentions would have a garden if he only knew the simplest "first aids" to gardening. The next generation will know, and because they know, their homes will be more beautiful, and they will be more prosperous, for a good garden will supply possibly all and more vegetables than the family will consume. A very small plot of ground will do wonders toward giving the family more and better vegetables, besides reducing greatly the cost of living, and making better men and women of our boys and girls.

This page of our catalog has proven so popular that we decided we could do no better service than to give special stress to the school garden work, now so ably carried on in conjunction with our common school education. The name of the founder of this branch of education should be in history with that of Thaddeus Stevens, the founder of our Public School System. The teacher of Agriculture in the public schools will do more for the betterment of humanity than any other branch of education.

With this idea in view we have made of this catalog, a primer for the school garden work. Pages 1 to 128 may well be entitled "First Lessons in Gardening."

To encourage the city wives and daughters to transform unattractive homes into beautiful cozy spots that may well be the envy of their more wealthy neighbors, (such beauty spots always proclaim louder than words the refinement and culture of the people living there)—

To encourage the more youthful members of the household and to co-operate with the teachers where gardening is taught—

It is to aid this work that we have made of this catalog a veritable encyclopedia for the gardener and rancher.

The children of 1917 are now young men and women. Many of them are so situated they can put to practical use the agricultural training they received in school.

GROW YOUR OWN FLOWERS AND VEGETABLES

The decision of the Superior Court of the United States validating the Alien Land Laws of California would forecast a lamentable scarcity and higher prices in cut flowers.

It is but logical to conclude that the present situation offers an opportunity for the "Little Lander" to make some real money growing cut flowers, small fruit and to specialize in fancy vegetables for fancy trade.

It is not only an opportunity, but it is indeed very urgent that you get busy at once.

The scarcity in vegetable food stuff may grow serious.

To the big planter we advise employing the skilled labor that may now be available in order to supply the inevitable demand for food. It is bound to prove profitable to anyone who will supply this demand.

Soil Renovators for Winter Crop

Inoculate with Mulford Culture



Melilotus alba

See Forage Plants

Melilotus alba I have come to the conclusion that, except on sandy soils, it is better to broadcast the seed than to drill it. This is especially true where there is alkali. Sweet-clover seed should be very close to the surface. A light harrowing or dragging with a light brush drag, will mix the seed with the soil sufficiently for germination. It is better, too, to sow the seed in the fall and let the rains bring it up. It gets a better start that way.

Melilotus alba is being recognized more and more each season as a valuable soil renovator. Because of its large and extensive root system penetrating deep into hard subsoil, there decaying, permits moisture to enter and break up the hardpan that plowing may become deeper and more thorough. These roots have gathered nitrogen and add much humus, all of which is essential to building up new or run-down soil.

Melilotus has other uses in soil renovating; it will grow in alkali soil and reclaim it. It will eradicate Bermuda and Johnson grasses; therefore, if you have any land that will be benefited by Melilotus alba by all means plant it. (Per lb. 35c) (10 lbs. \$3.00) postpaid. Write for quantity price.

Canadian Field Pea When it is too late to plant vetch or Melilotus plant Canadian Peas.

They may be planted as late as January and yet be plowed under in time for planting a summer crop. If your summer crop, like melons and potatoes are not harvested until November plant Canadian Peas.

Neither is the Canadian Pea inferior to other cover crops when planted at the right time. The right time is from September until February and on any kind of soil.

Notice—Do not plant just before a rain nor irrigate before they are well above the ground and established. If the soil is too wet after planting the seed will rot. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Berseem (Egyptian Clover) Very similar to alfalfa but not so hardy. As far back as 1901 we secured 100 pounds of seed and distributed it to alfalfa growers in various sections about Los Angeles. Imperial Valley was then a desert.

The reports were to the effect that it was fairly satisfactory, but not as good as alfalfa, due probably to the lack of hardiness.

Recently under government supervision some tests have been made in Imperial Valley and in Arizona with more favorable results. We have imported some seed which we offer at 40c per lb., postpaid. Write for quantity price.

Lime and Sulphur for Clover

Both Lime and Sulphur will be found on pages devoted to insecticides and fertilizers. We have also classed the two together as soil builders because Science has only recently discovered that Sulphur is a fertilizer, and it also destroys the microscopic germs of both Fungi and insects. Also that Sulphur and Lime together generate a gas that is highly beneficial to Clovers. We recommend that the two be applied to the soil at the same time. One sack sulphur and 300 lbs. lime per acre.

"Melilotus Reduces Injury by Nematode"

Writing to the editor of Farm and Tractor, D. D. Waynick, of Anaheim, says:

"The following note on the control or eradication of nematode is presented not as final in any sense, or possibly not even as new information. The results have been so striking, however, as to make them worthy of note.

"During the summer of 1920, twenty acres of Lima Beans were seriously injured by nematode. A conservative estimate placed the loss at 40 per cent for the total crop, while over the area 60 per cent of the plants were more or less affected. Following the bean crop, Melilotus indica was grown during the winter of 1920-21. By March 1, the Melilotus had reached a height of three feet or more, and the roots showed an abundance of nodules. Between March 1 and 15, the whole piece was plowed eight inches deep, and shortly thereafter four acre inches of water were applied. Because of late rains, the Bean crop this year was not gotten in until June 1. After 75 days of growth, not more than two per cent of the area shows any sign of nematode injury, and that not serious. With this exception, this year's crop loss due to nematode will not exceed one per cent."

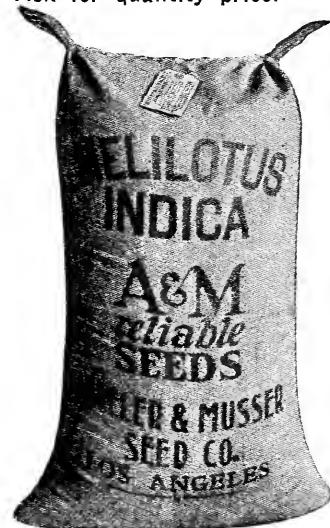


Melilotus indica in a young orchard

Melilotus indica Was introduced by us in 1909, has now become recognized as the legume best adapted for green manuring in the orchards of California, because it may be planted late in the fall after all crops have been harvested, will grow all winter with only the season's rainfall.

It prevents erosion during the rainy season, is easily plowed under, is richer as a fertilizer and if allowed to stand until July will prevent much of the June drop.

Melilotus indica is the best legume with which to build up your soil during the rainy season for the summer crop to follow, particularly potatoes and melons. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Ask for quantity price.



A tag on every bag says: "Approximate Purity 99.35%; approximate germination 92"

Hubam Clover and Purple Vetch

Two new cover crops for early spring planting to prevent the June drop, as well as soil builders.

Purple Vetch Write the Dept. of Agriculture, Washington, D. C., and ask for Farmers Bulletin No. 967. Purple Vetch gives promise of being a valuable addition to the list of nitrogen crops that can be grown where the temperature does not fall below fifteen degrees. Because of its rapid growth in the fall it is adapted to green manuring in citrus groves where it will be appreciated as of special value.

The chief value of Purple Vetch as compared with the common is in the rapid growth making it desirable both for fall and spring planting. The spring planting in citrus orchards prevents the June drop and is in prime for July plowing. It is a legume and therefore it is good fertilizer for the orchard. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Ask for quantity price.

Vetch For many years was considered the best legume for planting in orchards during the rainy season. It is only because Melilotus indica is a little harder than vetch now holds second place for that purpose; but science has discovered a new use for vetch. It is true that oats have long been planted together with vetch for the purpose of supporting the vetch that it may be easy to harvest. Now the new discovery is that vetch may be planted with oats, wheat, rye and barley in order that the grain will be fertilized by the nitrogen gathered at the roots of the vetch, thus greatly increasing your crop of grain, or if grown for hay it nearly doubles the yield. Twenty to thirty pounds of grain sown with twenty pounds of vetch per acre, will yield more and better hay than sixty pounds of grain per acre if sown by itself. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

During the last five years we have recommended to the Dairymen east of Compton, that they plant sweet clover (Melilotus Alba). Some of them did so. A trip through that district last fall revealed the fact that the road side and much of the territory is now over run with Sweet Clover.

HUBAM CLOVER

(ANNUAL SWEET CLOVER)

What is it good for? Chiefly for green manuring or a cover crop in citrus groves, or for hay, or bee pasture. It makes the finest kind of pasture for stock.

How long does it take to make a crop? From four to five months will produce seed.

Where will it grow? It is not particular as to soil, but it does require lime and the seed should be inoculated with nitrogen bacteria.

How should it be planted? Broadcast or sown four pounds per acre in rows 18 inches apart.



Hubam Clover in a Citrus Grove

Aug. 1, 1922.

AGGELER & MUSSER SEED CO.—

My experiment this season with Hubam clover makes me enthusiastic about its possibilities as a spring and summer cover crop. I believe it is the crop we have been looking for to plant in Valencia orchards. My experimental plot, planted March first, was nearly waist high by the end of June, in spite of a late cold spring.

I intend this season to make one planting in February, to be turned under after the "June drop" is over, and another planting in July to be turned under in the late fall.

Very truly yours,
ETHELBERT JOHNSON.

The following is from Mr. Johnson one year later:

I just turned under the finest cover crop I have ever seen, and I wanted to have you look at it before it was too late. I thought the trial plot last year was probably an exceptional growth, because of the great amount of water it had, but this year I had ten acres of Hubam every bit as thick, and as high as my shoulders when I turned it under, although it was not yet in bloom.

For early Spring planting, sow purple Vetch and Hubam Clover. For mid-summer planting, sow Brabham and Whip-poor-will Cow Peas.

The department of Agriculture has pronounced Brabham cow pea resistant to nematode, therefore it should have special recommendation.

The best time to plow under any crop for green manuring is when the plant has finished blooming.

Hubam as a Bee Pasture

When Mr. A. I. Root stood looking at Mr. Walkers field of Hubam Clover, a massive profusion of bloom, thick with bees, busy gathering honey; he remarked, "I verily believe that this plant will do more to make this land flowing with milk and honey than any other plant in the whole world." Per lb. 60c (10 lbs. \$5.00) prepaid. Write for quantity price.

Mr. J. B. Mather of Van Nuys is a successful potato grower, he is also a cover crop enthusiast. He grows but one crop of potatoes per year, always following a cover crop of *Mellilotus Indica*, which he plants at the rate of 20 pounds per acre in the following manner:

After plowing and leveling his land he broadcasts 10 pounds of seed, then furrows the land and broadcast's another 10 pounds and turns in the water. By this method the furrows are seeded as well as the ridges and a perfect stand is obtained.

He states that several years ago without cover crop his average yield of potatoes was 70 sacks to the acre, and that with his first crop he increased the yield to 230 sacks, increasing his yield 160 sacks at a cost of \$1.20 per acre for cover crop.

You will note that had he planted two crops of potatoes his yield would not have been more than 140 sacks, so that he has produced more potatoes in one crop than he could have produced in two without the use of *Indica*, and has eliminated the cost of planting and harvesting one crop of potatoes.

He states that the average cost per acre of producing potatoes is \$100.00 F. O. B. cars, and that his average yield over a number of years with cover has been 200 sacks per acre.

Only once has he failed and that time he planted his potatoes too soon after the cover crop was turned under. The decayed *Indica* heated the soil and he got a poor stand because of the seed rotting. He states that land should lay 15 to 30 days after plowing under before potatoes are planted.

Soil Renovators For Summer Growing



Whip-Poor-Will Cow Peas in a citrus grove. Time, Aug. 1st.

Whip-poor-Will Cow Pea

For more than twenty-five years the Whip-Poor-Will has been the standard summer crop for green manuring not only here but throughout the South. Why? (See picture.)

(1) It will grow on practically all kinds of soils, whether sandy or clay, poor or fertile.

(2) It is of the easiest culture.

(3) It has a big, strong, deep-root system, well supplied with large nitrogen gathering nodules.

(4) It revels in summer heat, and is extremely drought-resistant.

(5) It grows very rapidly, shading the soil from excessive heat, and leaving no room for noxious weeds.

(6) It greatly benefits the succeeding crop by accumulation of nitrogen in the soil.

(7) It leaves the soil in fine physical condition for the fall planting of grain or other winter crop.

(8) It produces an abundance of highly nutritious pods and leaves in a few months.

(9) It may be made into hay or ensilage, or pastured, the seeds may be used for stock feed or human consumption.

We have tried out many varieties of the cow peas which give such wonderful results in the south. The result of our trial is that we will discontinue offering those which showed decided antagonism to our climate. We are sure the Whip-Poor-Will is the best; it is entirely satisfactory for all purposes. Why, then, should we offer other varieties. Whip-Poor-Will is the best and has proven so since we first offered it in 1898.

Plant any time from April 1st until September 1st. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Brabham Cow Pea

It has only recently been determined definitely that the Brabham is resistant to nematode. This discovery places the Brabham foremost as a desirable summer crop for green manuring. Few districts are free from nematode and while other crops nursed it thus spreading it over wider territory, the Brabham will discourage its development and if repeatedly planted may eradicate it from the field in which the Brabham is grown.

Under the light of the discovery that the Brabham pea is resistant to the nematode, to plant it would seem the wiser thing to do. (Per lb. 25c) (10 lbs. \$2.00) prepaid. Write for quantity price.

Soy Bean

The Soy Bean is being more generally used as its merits become known. The importation of the Soy Bean from the Orient makes it unprofitable to grow for commercial beans or for seed but for early spring planting, for June cover crop and for green manuring it is very valuable and under certain conditions of soil may be preferred to clover or vetch. It is harder than the cow pea and on that account may be planted earlier. It is valuable to grow in young vineyards either to be plowed under or for green feed for dairy cows. (Per lb. 25c) (10 lbs. \$2.00) prepaid. Write for quantity price.

Broad Windsor Bean

Sometimes called Horse Beans, grows upright on a single stem bearing a profusion of large well-filled pods. The roots are enormously productive of nitrogen. It will withstand 28° temperature; therefore, may be planted as late as September for best results as a winter cover crop. (lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Small Windsor

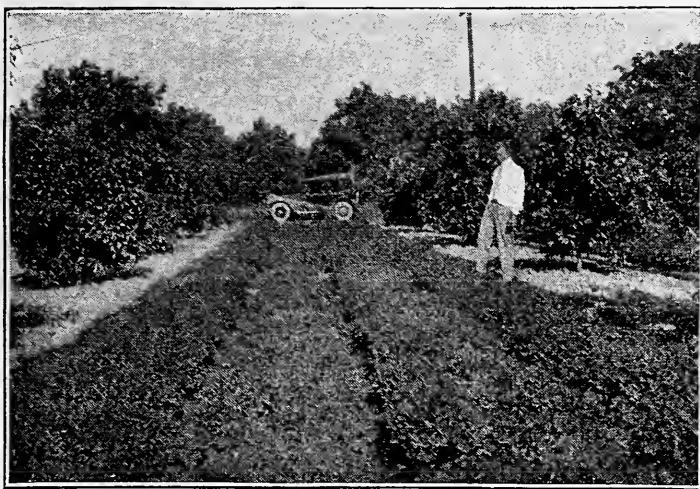
(Small Horse Bean) This is identical with the Large Horse Bean except that it will not grow as large, but is preferred by many for green manuring because of the smallness of the seed it requires fewer pounds to plant an acre and it is argued that more plants per acre will produce more nitrogen.

Its popularity has greatly increased during the year just passed and this is evidence that it has some advantages over the large Horse Bean. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

If you are pleased with this catalog, advise your neighbors and your friends to ask for one.

Soil Renovators for Summer Growing—Continued.

PEANUTS



Growing Peanuts in a young Orange Orchard is to get your fertilizer for nothing. Harvest the peanuts and plow under the vines. It will meet expenses while the orange trees are growing. The Virginia Improved Variety is the best for this purpose. (Per lb. 30c) (10 lbs. \$2.50) prepaid. Write for quantity price.

SOIL BUILDERS

How Science Benefits Agriculture

Your Soil Fertility Will be Improved by Proper Crop Rotation

"The sowing of nitrogen gathering plants for green manuring has become so popular because of the excellent results obtained and because of its cheapness as a fertilizer that its use is now almost universal; not only for orchards, but for fields particularly where melons and potatoes are to be planted.

"If your land is sloping, you need a cover crop to prevent eroding during the rainy season.

"If your land is lumpy and dry, lacking life, it needs humus and nitrogen.

"If your soil is sandy and fails to retain moisture, it lacks humus and nitrogen.

"If your soil is of clay and bakes and crusts readily, it needs humus and nitrogen."

The best nitrogen gathering crops for fall planting are Winter Vetch, Canadian Peas, Melilotus and Broad Windsor Beans.

An application of one or two hundred pounds of Sulphur per acre of alfalfa increases the yield very considerably even to as much as three tons per acre during the season.

The seed should be inoculated with Mulford Culture for best results from legumes.

Plant Cover Crops for Best Results

Which will you do—Buy manure or raise cover crops? Here is the comparison:

	Nitrogen	Acid	Potash
A ton of vetch (dry) contains.....	55.6	16.2	53.6
A ton of clover (dry) contains.....	45.8	9.4	31.6
A ton of manure (dry) contains.....	9.8	5.2	9.6

Bulletin No. 190, U. S. Dept. of Agriculture, says:

"A green manure crop should be a legume wherever possible, in order to obtain the addition of nitrogen to the soil. It is also necessary that a good growth be made, in order that we have a large quantity of organic matter to turn under and incorporate with the soil. Along with good growth should be a heavy development of nodules on the roots, as this is believed to indicate great ability to fix atmospheric nitrogen."

SULPHUR HELPS IN MERCED

Tests undertaken this year by Farm Adviser Grass show that the combination of lime and sulphur as an alfalfa stimulant has proved a great success for alfalfa on light soils. In certain cases sulphur alone seems sufficient. On heavy soils materials are slower in action and results are not very apparent.

With sulphur alone 220 pounds per acre are used, and when lime also is applied only 110 pounds of sulphur are used and 300 pounds of lime.

Melilotus alba for the Range

Mr. Stockman, as soon as you read this send for some seed of this Sweet Clover and just to get a start sow at the rate of one pound per acre all over your range. On any kind of soil. If not pastured too closely you will soon have a valuable range for your stock.

Read This

A new market for alfalfa hay. Many Orchardists are now mulching their groves with alfalfa hay. This practice is yet experimental, but should it prove practical this will open a market for an enormous tonnage of the cheaper alfalfa hay.

PLANT A & M SEEDS

A & M Alfalfa

INOCULATE WITH MULFORD CULTURE
SEND FOR OUR ALFALFA BULLETIN, ITS FREE

Chilean or Common This variety has proven so entirely satisfactory to everyone for more than forty years that nothing better was looked for, and is indeed now so thoroughly satisfactory that many will hesitate to believe that any variety of alfalfa can be better, therefore we have an ample supply of Chilean seed.

Write to the University Farm, Davis, Cal., and ask for their latest reports concerning Hairy Peruvian alfalfa as compared with the Chilean or Common Alfalfa, or write us for our Alfalfa bulletin.

The experiments at the farm show clearly the shorter life of Hairy Peruvian under similar conditions. It will start earlier in the Spring and continue to grow later in the Fall, but the Chilean will produce more hay throughout the summer.

The quality of the hay of the Hairy Peruvian is coarser and becomes quite woody and is much inferior to hay of the Chilean alfalfa.

There is a greater demand for Chilean Alfalfa hay than for other varieties, it being a superior dairy feed. Furthermore it brings a higher price on the market which, of course, is an exceedingly strong point in favor of planting your acreage to the Chilean variety.

We have often been asked where the seed which we sell was grown, some being under the impression that Alfalfa seed produced in particular sections is preferable, but we have found, through careful investigation, that such is not the case and no certain section is favored in producing superior seed.

If the stock is of high germination, free from noxious weeds, and true to name, that is the great consideration.

Write for quantity price.

Hairy Peruvian We first offered this variety in 1918. It is hardier and it does produce more hay the first year than common alfalfa, but it does not endure as well. Many large growers now prefer the common alfalfa. With these comments we offer the Hairy Peruvian Alfalfa to those who may have had better results and yet prefer it. Write for quantity price.

Maintaining Alfalfa by Bacteria

Editor Farm and Tractor Section:

The farmers of Orange county say: "Yes we can get a fine stand of alfalfa, but in three years the grass and weeds have taken it." Why is this?

In Mr. Corcoran's excellent letter in the Farm and Tractor Section of February 13, he says: "A good, even, vigorous stand of alfalfa goes a long way toward keeping out Bermuda grass." Now we of Orange county can get the stand; why is it not maintained "good and vigorous?" There are in various localities of the world "good and vigorous" alfalfa fields, ten, twenty, thirty and even fifty years old. Why not here, where some claim we have the best soil on earth?

May it not be true that the answer to this vital question is hinted at in Mr. Corcoran's closing paragraph concerning bacteria inoculation:

Bulletin No. 308 issued by the Wisconsin University, referring to a field inoculated with pure culture alfalfa bacteria, says: "In the early stages of growth, weeds are a menace. After the crop becomes well established it in turn becomes a menace to nearly all bad weeds. Inoculated alfalfa may add more than 100 pounds of nitrogen to an acre of soil each year, besides that removed in the crop. * * * Manure and lime, with inoculation, yielded 2500 pounds of alfalfa an acre. Manure and lime, with no inoculation, yielded 1,180 pounds of alfalfa an acre."

Cornell Extension Bulletin, June, 1916, says: "Alfalfa is dependent for its successful growth on the presence of nodules, as well as on a limed soil, and in most parts of New York State inoculation is absolutely essential. * * * Various men who have used the pure cultures have become so enthusiastic over the results obtained that they have written in, saying that they will never plant legumes without practicing inoculation."

A Virginia Bulletin, No. 207, page 10, says: "Many failures in growing alfalfa may be attributed to lack of inoculation."

Wherever we find successful old fields of alfalfa, if the roots are carefully dug up and examined the supply of bacteria nodules will be found to correspond to the vigor and quality of the plant."

Alfalfa Lucerne. This may well be called the King of Forage Plants; all stock relish it; may be grown in nearly every state in the Union and it is essential to the best interests of every rancher, small or large. To the "Little Lander" with a few chickens and rabbits, as well as to the large rancher with hundreds of cattle, horses and hogs. It may be cut and fed green; judicious grazing does not injure it. If mixed with sorghum in the silo, it improves the ensilage, and as dry hay it is unexcelled. It is leguminous and, therefore, a soil renovator.

Cultivation is very simple, the essentials being well drained soil, good grading, thorough subsoiling, thorough watering and judicious harrowing; also proper fertilizer, especially on new ground.

Nurse Crop with Alfalfa

As a rule on Sandy lands that are subject to drifting, or on heavy lands which have a tendency to bake, a nurse crop may be of benefit as it reduces drifting or baking. Unless the soil is subject to drifting or baking it is not advisable as a general rule to use a nurse crop. Under dry land conditions a nurse crop should never be used, as the moisture supply is too limited. JAMES MARSHALL, Colorado Agricultural College.

A & M CLOVER FOR HAY OR PASTURE SWEET CLOVER FOR FORAGE

Melilotus alba This is a valuable addition to the farm as a forage crop. When quite young, it may be pastured or cut and cured for hay. This should be done just before the bloom appears. It is harder than alfalfa, more drought-resistant, and better for renovating the soil. It may be cut twice the first season and three or four times the second season, yielding 2500 to 3000 pounds of hay each cutting. It is as easy as alfalfa to eradicate, is biennial. On account of its hardness to resist extreme cold, heat and drought it is grown largely for pasture. It is highly recommended by the Department of Agriculture. (Per lb. 35c) (10 lbs. \$3.00) postpaid. Write for quality price.

21 Reasons for Planting Melilotus alba

1. It is not a weed.
2. Like alfalfa, it is rich in protein.
3. Will not bloat cattle or sheep.
4. Equal to alfalfa for pasture.
5. Is a great milk producer.
6. Furnishes early spring pasture.
7. Contains more protein than red clover.
8. Fits well in the crop rotation.
9. Is a great soil enriching crop.
10. Better than any of the common clovers as a green manure crop.
11. Is a valuable plant for honey bees.
12. Prepares the soil for alfalfa.
13. Roots are soft and give no trouble in plowing.
14. Roots being tender become inoculated more readily than alfalfa.
15. Never damages cultivated crop.
16. Its roots decay rapidly, adding much nitrogen and humus to the soil.
17. Grows and will produce a crop in all parts of the United States.
18. Seeds freely in both humid and dry sections.
19. Sweet clover prevents erosion.
20. Will grow under conditions where clover and alfalfa fail:
 - (a) On land too low, too wet or too alkaline for alfalfa.
 - (b) On land too hard and compact for alfalfa.
 - (c) On soil too poor for alfalfa, especially where there is lime.
21. It is immune to nematodes.

Now read again these twenty-one reasons for planting Melilotus Alba, and see wherein it suits your particular case.

A Few Don'ts

- Don't plow deep.
- Don't sow deep.
- Don't cut low in mowing—at least 6 inches high.
- Don't have subsoil loose.
- Don't be afraid to sow sweet clover.

Red Clover (Common) This clover is quite familiar to the rancher from the eastern states where it is to the dairyman what our alfalfa is here.

It is harder than alfalfa, therefore we recommend it for higher altitudes or farther north than the San Joaquin Valley where it will not be subject to the hot dry atmosphere of the interior valleys nor to the climate of Southern California.

There is a place for Red Clover, but not where alfalfa thrives. (Per lb. 60c) (10 lbs. \$5.00) postpaid. Write for quantity price.

Mammoth Red Clover In England and in English "Cow Grass." The name recommends it to dairymen.

The same instructions for common Red Clover apply also to Mammoth Red Clover. (Per lb. 60c) (10 lbs. \$5.00) postpaid. Write for quantity price.

Alsike or Swedish Clover This is one of the hardest varieties known. It is perennial and does not winter kill. It will do better on moist land than any other variety of clover, and is suitable for either hay or pasture. When sown with other grasses it forms a thick undergrowth and greatly increases the yield. (Per lb. 50c) (10 lbs. \$4.50) postpaid. Write for quantity price.

Sulphur together with lime is a good fertilizer for alfalfa. When alfalfa has an unhealthy appearance, immediately after cutting, broadcast 200 pounds of slack lime and one sack of Toro Sulphur per acre, then irrigate. You will soon see a vast improvement in the appearance and growth of your alfalfa.

A Word About Bloating

You dare not pasture cattle on alfalfa during the night and early morning for fear of bloating. But you may pasture them on Sweet Clover; therefore, in order that your cattle may feed during the night and early morning, have a field of Sweet Clover to pasture at that time, and thereby you produce more milk, save the alfalfa and avoid bloating.



Melilotus alba on the dairy ranch of Fred J. Phelps, Artesia. Mr. Phelps says it is very satisfactory on his alkali soil.

A & M GRASSES

During the five years just passed we have at great expense and much labor experimented with many grasses from all parts of the world. We have tried them under various conditions. We fenced in a half-acre right in the heart of a desert where bunch grass was abundant, where many varieties of edible brush thrives, apparently to perfection and wild flowers in profusion. We cleared the ground but did not plow it. About the middle of December we sowed broadcast all over this half acre, one pound of each of Melilotus Alba, Australian Salt Bush, Dallas Grass, Harding, Rhodes Grass, Perennial Rye, Russian Brome, and Smilo. We also transplanted a number of grasses and watered them until they were well established. Everything was done just right on a morning after a rainfall that soaked down two inches.

The rainfall for that season was insufficient to produce any wild flowers neither did we get any results in the half acre.

The following season there was abundant rainfall, and a profusion of wild flowers. Still nothing showed up in the half acre, and none of the plants survived any great period after we ceased to water them.

With this discouraging experience we are slow to recommend any great expenditure toward reseeding the desert where there must be absolute dependence upon rainfall.

The Grasses we offer will be recommended for the conditions under which they are known to thrive.

MR. DAIRYMAN AND STOCKMAN, READ THIS

You want the best as well as the most economical feed you can obtain upon a limited acreage. To get this you want the crops that will give you the best quality and greatest tonnage for your silo. You also want the pasture that will give you best quality and quantity extending over the longest season. You also want the crops best suited to your soil and climatic conditions.

We have given much attention to your requirements and we are sure you will find in these pages something suited to your purpose.

ORCHARD

COCKSFoot

(*Dactylis glomerata*)

Cocksfoot will grow well under a wide variety of conditions. It is not a particularly drought resistant grass, but it readily adapts itself to nearly all types of soils. For forty years it has thrived on the rocky and hilly lands of New Zealand. Where other grasses died out it produced luxuriant crops of grass. It is a stooling plant. It seeds freely and any bare spots on the ground are soon seeded by the plant itself. The plant grows three to five feet high. It is not easily killed out by close grazing as many pasture and ranch grasses are.

This grass does well sown either with or without other grasses. It is frequently sown in such pasture mixtures as white clover, red clover and rye grass. If sown alone, 25 or 30 pounds of the Cocksfoot seed will insure a good stand of grass.

Keep the cattle away from the grass until it is well established. Otherwise the young plants may be eaten so close and trampled so much that they will die. After the grass once makes a good growth the danger of this is slight.

(Per lb. 50c) (10 lbs. \$4.50) postpaid. Write for quantity price.

RED TOP

(*Agrostis vulgaris*)

Red Top is a perennial grass which grows from a few inches to five feet in height under varying conditions of soil and climate. But the average height is probably 18 to 20 inches. It is now more highly esteemed as a pasture grass than for a hay, because of its power to endure, and because of the degree of its permanency, but in many areas it is still considered important for hay.

No other useful grass would seem so well adapted for growing in wet situations, even in places so moist as to be saturated with water for a considerable portion of the late autumn and the early spring. It will even stand shallow submergence for several days, when the weather is cool, and for a longer period than almost any other useful grass when it is warm.

The soil should be carefully prepared. Thoroughly pulverized and clean of weeds. Sow broadcast 14 lbs. of seed per acre.

(Per lb. 50c) (10 lbs. \$4.50) postpaid. Write for quantity price.

PERENNIAL RYE

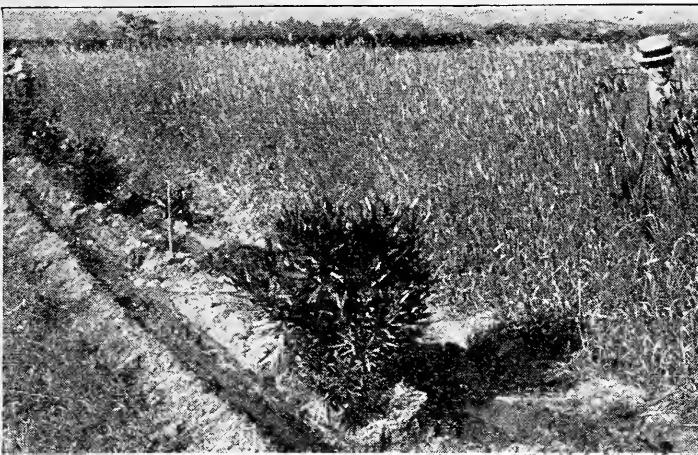
(See Lawn Grasses)

Also called Australian Rye. Probably the oldest cultivated grass in existence, having been in cultivation previous to 1677, and is yet grown for pasture probably as extensively as any other grass. It quickly covers the ground with a dense mat of foliage ten inches deep with seed stems twenty inches high. It is perennial, but endures seldom beyond the third year. It is an ideal crop for rotation.

Sow in the fall with barley, oats, wheat or alfalfa, to be pastured. It is excellent for fattening cattle.

Sow 20 pounds per acre. (Per lb. 35c) (10 lbs. \$3.00) postpaid.

Kikuyu This grass gives promise of a wonderful permanent pasture for meadow lands. It creeps over the surface smothering any low-growing vegetation that may be in the way. A field would have the appearance of a lawn with grass 12 to 18 inches high. We have only a very small patch from which we will supply anyone wishing a sample. There is no seed. It must be started from cuttings. We offer samples of sufficient number of cuttings to get it established for \$1.00 each sample; postpaid.

HARDING**A & M GRASSES**

This picture was taken of a field at Altadena on the ranch of Mr. Thompson. Read the following letter. We can describe it no better:

HARDING GRASS FOR PASTURE—Written by J. A. Stambaugh, Benton Co. Oregon.

"While Harding grass takes kindly to the Northwest, as here in Benton County, Oregon, it is making a splendid growth. Harding grass being a real perennial, once planted, you are done with it until you might wish to put in other crops. It cannot become a pest, as the roots and crown are easily killed, being similar in form to those of timothy and rye grass.

Harding grass will certainly make other parts of the Northwest equal, if not superior, to the Tillamook grass lands, for the dairy industry, not only for dairy cattle, but for beef and mutton as well. It is a good pasture grass that will resist the onslaught of heavy grazing.

In a climate where stock can be run in the open almost the entire year a good growing grass would add much to the wealth of the entire Northwest, making it possible to compete with the territory of cheaper lands, beside giving us a decided advantage in marketing our stock.

Our first planting was done on May 4th, 1919. It grew very well during the following summer. In December, 1919 was the heavy snow 25 inches deep and the temperature as low as 16 degrees below zero, but as the snow melted up, the Harding grass showed up finely with a tender green growth.

This grass was allowed to mature seed, which was cut in August 1920. On March 12, 1921, it had made a growth of from 21 to 36 inches in height, a leafy mass, very tender and sweet.

On May 2, 1921 the growth had reached an average of 40 inches in height, with the tallest blades stretched up to 56 inches.

By May 18th, the first heads had appeared out of the boot and the grass had made from 18 to 20 inches growth. Rain fell on Oct. 18th, 1921 and on Nov. 30, 1921 we found the grass somewhat bent by the heavy winter rains, but by stretching up the blades we found the best to be 40 inches in height, while the average was about 30 inches.

Under the test for tender growth, have been cutting some of the 1919 planting once a week, and up to Nov. 4th had been making 4 inches growth per each seven days. From Nov. 14th, to Nov. 28th, two weeks, the growth was 5½ inches, the weather being rather cool.

On May 30th, 1921 we planted four acres of Harding grass. Being rather late we did not get more than an 80% stand. But it is looking well and some of the bunches have made a spread of 5½ feet.

The first season this grass spreads more in proportion than it grows upright. I have now grasses growing on four different soils."

It grew quite as well on our experimental plot in Los Angeles. (Per oz. 50c) (lb. \$3.50) postpaid.

ALFILARIA

(*Erodium cicutarium*)

Alfilaria or "filaree" has been and still is a life saver for the California ranges. It grows wild without any attention in all classes and conditions of soil except swamps and excessive alkali. Soon after the first heavy fall rains have saturated the ground the "filaree" begins to make its appearance. It is good pasture at all stages of its growth, even when mature and dried up. In nutritive qualities it compares favorably with alfalfa and live stock of all kinds fatten on it readily. It is hardy even where the winter temperature reaches zero or below. Little or no preparation of the soil required. It attains perfection where introduced in Texas.

Sow 6 lbs. of seed per acre. Sow just before the rainy season. (Per lb. 85c) (10 lbs. \$7.50) postpaid. Write for quantity price.

AUSTRALIAN SALTBUSSH

(*Atriplex semibaccata*)

Cardinal points: For range near the coast or interior lowlands where fogs are of frequent occurrence—any kind of soil endures much alkali—thrives with a minimum of moisture—very succulent during winter, spring and early summer, it is relished by all stock—becomes parched by heat in late summer, then it is less palatable to stock, but they will thrive if forced by hunger to eat it—it seeds freely. Requires no preparation of soil for seeding. Cannot cut and dry as hay—has one tap root—easily eradicated.

(Per lb. 85c) (10 lbs. \$7.50) postpaid. Write for quantity price.

RHODES

(*CHLORIS CAYANA*)

Write Department of Agriculture, Washington, D. C.)
Ask for Farmers' Bulletin No. 1648



Another year of experience with Rhodes Grass has added much to its popularity. It might be claiming too much to say that for a permanent pasture field it excels alfalfa, but it is no exaggeration to say it has a wider usefulness, because it will thrive on soil too alkaline for alfalfa. It will endure more drought, more pasturing, more neglect, and will support as many head of stock per acre.

The following extract is from the U. S. Department of Agriculture Bulletin 1048:

"Rhodes Grass was first cultivated because of its pasture value. It bears pasturing well, recovers quickly after it is eaten down, and is relished by all kinds of live stock. In pastures favorably located, Rhodes Grass will support about two steers to the acre for 9 to 10 months and double that number during the more favorable parts of the year. The quality of hay made from Rhodes Grass is superior to that of most other grasses in that it contains a larger proportion of leaves, while the stems are slender, tender and sweet, so that the hay is eaten with very little waste. It retains its color well in drying, therefore making an attractive bale for the market."

In every instance the better stand was obtained by broadcasting the seed over the salt grass. Flood the field frequently after sowing the seed until it has become established; then irrigate as usual.

The best field of Rhodes is located along the boulevard south of Artesia. Mr. Campbell is very much pleased with it.

Mr. Dairymen, there is no longer any excuse to permit any alkali lands to be wasted with tar weed. Your alkali lands are now a valuable asset. Rhodes grass will increase the value of these acres several fold. See what Mr. Campbell has done and be convinced.

Mr. McArthur of this city planted twenty acres near Holtville, in Imperial Valley, on soil that was white with alkali. He is very enthusiastic concerning it. He says it is the most valuable grass that has ever come to Southern California. There is no longer any excuse for waste places; every acre of alkali soil may now be converted into valuable grazing land.

Rhodes grass does not grow underground sprouts like Johnson or Bermuda grass, but sends runners over the surface like the strawberry plant. It is easily eradicated.

Rhodes Grass will smother Bermuda and other weeds because of its dense growth. It is easily eradicated by being plowed once and let stand for sixty or ninety days. It adds humus to the soil.

The best time to plant Rhodes Grass is from March 1st to August 1st. Broadcast twelve pounds of seed per acre, going over the field twice, once north and south and east and west, sowing six pounds each way. Keep the soil continually moistened until the grass is established. Do not pasture until after the second cutting.

(Per lb. 85c) (10 lbs. \$7.50) postpaid. Write for quantity price.

RUSSIAN BROME

(*Bromus inermis*)

Bromus inermis is one of our hardest perennials grasses; no amount of cold will kill it. It withstands the severest drought, and water may stand on it for weeks. It will grow on any rich soil.

It requires twenty pounds of seed per acre.

Russian Brome Grass is essentially a winter pasture grass, but it also makes good hay. All kinds of stock are fond of it, and no other grass, unless it be orchard grass, will furnish grazing for so large a portion of the year. Its producing and feeding value for hay is about equal to that of timothy.

It keeps alive under conditions that would destroy many other grasses and it will then grow vigorously when moisture is brought to it. It can be made to render excellent service in states where rainfall is not more than 12 to 15 inches.

(Per lb. 60c) (10 lbs. \$5.50) postpaid. Write for quantity price.

"Please send by parcel post one pound of Harding grass. I am hoping this grass will prove a help to California Stockmen as it remained green all last summer sending up some seed stalks that I allowed to ripen and to drop the seed for reseeding, hoping to get a thick sod. The clumps of blades at the roots are new very vigorous and the stock are very fond of it. This plot was planted about one year ago."

B. R. JONES.

A & M GRASSES—Continued.

SUDAN



Sudan Grass Has made good and has become more popular each year. It is not particular as to soil—endures much alkali—an annual—planted during April, first cutting in sixty days may yield four tons of dry hay per acre and three to four tons may be cut each thirty days until October.

Twelve pounds of seed is required to plant an acre in order to produce hay of fine quality.

The seed may be planted with a Superior beet drill or other drill with extra plate or sow broadcast.

Sudan Grass thrives with excessive moisture and endures extreme drouth. The foregoing points are not all the best features of this grass. In the months of August and September, when all other grasses are dry, then is the time that Sudan is most valuable for fall pasture for cattle and hogs.

Sudan Grass is ideal for growing with the Whip-Poor-Will Cow Peas. The stem is stiff enough to support the vines, and the mixture makes a better balanced ration for the stock. It is a good silage. It is a good thing to plant in old alfalfa fields. (Per lb. 30c) (10 lbs. \$2.50) postpaid. Write for quantity price.

Read

Last year our catalog contained the following information: Mr. Hamilton Alexander, a Dairyman of Holtville, early in June 1922, asked us what to plant to feed his cows during August and September and until alfalfa came in again. He stated that he had a rundown field of alfalfa, over-run with Bermuda. We advised that he harrow the alfalfa and broadcast Sudan Grass.

Within four weeks thirty head of cattle were pastured on this seven acres for eleven days. We advised that the cattle be taken off and the field mowed and irrigated. Considerable feed was hauled off when mowed.

Read Their Subsequent Report

"It is wonderful! Every one who has seen our field declares they have never seen anything to equal its growth. We were forced to turn our cows in on it after two weeks from the time we watered it. Its growth was amazing—walks right by alfalfa. We are planing to turn the cows on it again in two weeks. Everyone declares Sudan Grass settles the green feed problem in the Valley. People, too numerous to mention are planning to plant Sudan. Cows just love it and give lots of milk on it. We can't praise it highly enough. When the field was mowed it was discovered there was less Bermuda and more and better alfalfa than when the Sudan seed was sown."

We have been advised by Mr. Alexander under date of Aug. 20th, 1923, that the alfalfa nursed the Sudan through the winter. It revived so that during the second season he had as good Sudan pasture as during the first season.

This is the first instance reported to us where Sudan was of any value the second season.

No doubt this was due to the protection afforded by the alfalfa.

Alfalfa had protected the Sudan through the cold winter months. Therefore if your Alfalfa is over run with Bermuda, sow Sudan during the months of June or July.

POULTRYMEN

To the small stock breeder and poultryman, you will find in the subject of grasses just as much of interest to you as to the large breeder. Read it carefully.

TIMOTHY

This is the grass so popular in the New England and the Middle Atlantic States. Where it is usually mixed with Mammoth Red Clover. This mixture makes excellent hay or pasture. Timothy has not proven satisfactory in Southern California, but does very well in a high altitude with sufficient moisture. (Per lb. 35c) (10 lbs. \$3.00) postpaid. Write for quantity price.

BERMUDA

(*Cynodon dactylon*)

Bermuda Grass is unquestionably the best pasture grass in the south, viewed from the standpoint of palatability, productiveness and endurance. There are reasons for believing that in its proper sphere it will produce more grazing and more meat than blue grass under the most favored conditions. Sheep can graze upon it from 7 to 9 months in the year according to locality. Sow seed during May and June, five pounds per acre. (Per lb. 50c) (10 lbs. \$4.50) postpaid. Write for quantity price.

CHEWINGS FESCUE

(See Lawn Grass)

One of the best grasses to sow in a meadow. Mixed with Red Top and White Clover it is a valuable pasture grass. It is also suitable for lawns and putting greens. Sow 20 lbs. per acre. (Per lb. 60c) (10 lbs. \$5.50). Write for quantity price.

DALLAS

(*Paspalum dilatatum*)

This grass should be established on pastures.

Grows on any kind of soil—endures some alkali—excellent for permanent pasture on marsh or mesa—grows winter and summer with moisture—excellent for hay—may be cut every six weeks—becomes dormant with drouth but revives with less moisture than any other grass, yet will survive if submerged for several weeks—stools and seeds freely. It has been tried and proven in this section to be one of the best of grasses for permanent pasture in meadows, in swamp lands, or on mesas where it must depend solely upon the season's rains.

The seed takes root among the weeds and devil grass, choking out everything in its way. The dense matting roots make a thick sod capable of supporting the cattle on marshy land. The stock relish it fully as well as alfalfa. It is as easy to eradicate as Timothy or as any other bunch grass. Ten pounds is sufficient to sow one acre broadcast. It thrives in high altitude.

The second year's growth of Dallas Grass on our trial ground excels all the low bent grasses for quick recovery after drouth. (Per lb. 75c) (10 lbs. \$6.50) postpaid. Write for quantity price.

PACIFIC RYE

An excellent hardy grass for the coast range, on hillsides and meadows. It resists drouth wonderfully and is quick to recover after a slight rainfall. Sow 30 lbs. per acre. (Per lb. 35c) (10 lbs. \$3.00) postpaid. Write for quantity price.

ITALIAN RYE

(*Lolium italicum*)

Arrives earlier at maturity than Perennial and produces a large amount of nutritious herbage. Its duration being but two or three years, it is not adapted for permanent pastures, yet highly valuable for rotation of crops. It is specially adapted for sowing in autumn with oats, barley, rye or clover, as a catch-crop for fattening stock. Sow 30 pounds per acre. (Per lb. 35c) (10 lbs. \$3.00) postpaid. Write for quantity price.

SMILO

(*Oryzopsis milacea*) Many Flowered Millet

(Recommended by the University of California.) It is a hardy evergreen perennial, drouth-resistant bunch grass that thrives on dry hills among rocks and brush, and is a wonderful producer when planted in good soil but must have sufficient moisture to get good root system before the dry season. It also thrives under trees.

Smilo will not become a pest, as it has fine fibrous roots which penetrate very deep, but is easily cultivated out.

Do not plant seed over $\frac{1}{4}$ inch deep. Better sow on top of ground and harrow lightly. When planted deep we have known Smilo seed to be in the ground two years, but as soon as brought to the surface and got sufficient moisture it came up and made a good stand.

When possible plant seed before fall rains, during September and October, so that it may get a good root system during the cold weather that it may withstand the following dry season.

(Oz. 50c) (lb. \$3.00) (10 lbs. \$26.00) postpaid.

THE WONDER FORAGE



This is the fifth crop of Wonder Forage from one planting during 1919. Two cuttings a season. This represents the third season.

THE WONDER FORAGE PLANT

It stools from ten to forty full sized stems the thickness of a thumb and smaller. When the main stems mature, separate branches grow from each joint bearing other seed-heads.

The stems are succulent and sweet, as saccharine cane, not dry as non-saccharine cane, therefore it is as good as sorghum for dairy cows. Stock will eat every particle of it.

Our demonstration clearly indicates the Wonder Forage Plant will yield double the tonnage of any other sorghum. Five pounds of seed is sufficient to plant an acre.

Dairymen, each year that you delay planting this Wonder Forage Plant (Sudan Sorghum) you are missing something worth while for green forage. One acre of Wonder Forage is more valuable than three acres of Sudan Grass, both in quantity and quality. One acre is equal to two acres of sweet sorghum. The latter can be cut but once, the former twice with equal tonnage. (To do this will require good soil and ample irrigation, but it will do it). It has less sugar content than sweet sorghum, but must be classed as a saccharine. Do not waste another season by holding off. It is so much better than Sudan that there can be no comparison.

Mr. McConnell planted seed in June, 1919. August 15th, he made the first cutting. It stood ten to twelve feet high, fully headed. The tops are panicle shaped and, because of the multitude of stools, it easily leads other varieties in quantity of grain, none of which is lost in harvesting, which was done with an alfalfa mower.

THE WONDER FORAGE PLANT

The Crop for Soiling Last year we gave special recommendation to this for use in the silo because of the enormous production, but we have been assured by Mr. Pellisier of the Los Angeles Creamery, who tried it last year, that because of its constant growth of green stems it is unfitted for the silo, but for green or dry feed it beats all sorghums.

The above picture indicates what it would be worth in green feed to the grower who has rich soil and an abundance of water. If you have these, we are sure there is no sorghum or other crop that will equal it in tonnage of rich valuable green or dry feed.

This picture was taken at the dairy ranch of Mr. McConnell at Lankershim. This is the third season for this field and as you can see it is ahead of any sorghum for yield.

He let it stand dormant all winter and when the warm weather arrived he never saw anything send out new growth like this.

Stockmen, if you want a rich, green feed, sow the Wonder Forage.

(Per lb. 40c) (10 lbs. \$3.50) postpaid. Write for quantity price.

Mr. Holtzclaw of Tulare County advises us that he had never seen any crop to grow like the Wonder Forage. He grew 40 acres of it and his great trouble was where to store it all. It is excellent for feeding green or to cure for winter feed. He says also of the Silver Tip Sorghum—It beat any sorghum he ever grew before and he thought he knew all kinds of sorghums. The Silver Tip will grow more tonnage for the silo than any other variety.

Egyptian Corn Like the preceding fodder crops, it is grown chiefly for the foliage to pasture when young, but yields largely of grain. The chief merit of these fodder crops is in their hardiness to produce fodder and grain with almost no rainfall or irrigation. Sow eight pounds per acre drilled. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

POISONING BY SORGHUM: Many are reluctant to feed Sorghum for fear of poisoning stock, but we herewith give the facts:

When cut before flowering, it must be allowed to wilt in the sun for several hours before being fed to the stock as at this stage it contains a proportion of prussic acid and is liable to be poisonous. This disappears after the flowering stage is reached. The poisonous quality is more noticeable in the second crop, or, when after a period of drouth or frost when young it has become stunted. In the form of properly prepared silage or dry fodder, Sorghum is never poisonous, but it is dangerous to pasture or to feed green sorghum after it has been frosted or stunted; it should then be cut and dried or ensilaged.

If this Catalog pleases you, tell your neighbor to ask for one.

PLANT SORGHUM FOR THE SILO SACCHARINE SORGHUM

CULTURE: All surghums, saccharine or non-saccharine, should be sown in rows 30 or 36 inches apart, using five or six pounds of seed per acre. If irrigated it is necessary to cultivate it after each irrigation. It is advisable to give a shallow cultivation every two or three weeks until it becomes too large. The sorghum is ready to cut for the silo when the seed has matured.

This kind of sorghum is distinguished from the Non-Saccharine because it is from these varieties that syrup is made.

But these Sorghums are more generally grown for forage because they will thrive well with little moisture, but on good soil with irrigation will produce 20 to 30 tons of silage per acre.

At our demonstration of Sorghums the Silver Tip outclassed all other varieties for tonnage of green fodder. Texas Seeded Ribbon Cane was next in line. It is more branching than others.

Silver Tip The Sorghum for syrup. A local manufacturer of Sorghum syrup says: "The Silver Tip excels all other Sorghums in quantity and quality of syrup. A yield of 400 gallons per acre was the average obtained from my field. It will yield 20 tons of silage at one cutting.

(Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Honey This variety proved to be very desirable because of the large yield of grain, as well as enormous growth of forage.

It is given special recommendation in the Farm Bureau Monthly, and has proven highly satisfactory to all who grow it.

(Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Early Amber The Early Amber has been grown in California for more than thirty years and has always proven entirely satisfactory. It grows twelve feet tall when allowed to mature, but it stools to a wonderful extent when cut about every four weeks.

(Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Texas Seeded Ribbon Texas Seeded Ribbon Cane is one of the best crops that can be grown to use as ensilage on account of the enormous yield it makes per acre.

"Land is too valuable to get from 5 to 10 tons of silage when the same acres can yield 25 to 30 tons per acre with same expense. Others have received these results and any farmer can do the same." (Per lb. 30c) (10 lbs. \$2.50) postpaid. Write for quantity price.

READ

If you need forage for your horses, cattle or hogs, Sorghum planted about April 1st will furnish you the best feed in the shortest space of time. One-half acre will feed four head of stock all summer if only enough is cut each day for one day's need. In this way one can cut continuously all summer. As much as 40 tons may be cut from one acre.

Ten Reasons Why The Silo

We first advocated the silo in 1917. At that time there was scarcely 500 silos in the state. The California Cultivator in their June number reports 2,563 silos in California and reviews the ten or more reasons why.

Here are ten good reasons why a silo should be on every farm where dairy or other cattle are fed.

1. The silo preserves the palatability and succulence of green crops for winter feeding.
2. It conserves the entire crop.
3. The silo increases the live stock capacity of the farm.
4. Silage can be fed in summer when pastures are short.
5. Silage is relished by all kinds of stock.
6. It is digestible and aids in the digestion of other foods fed with it.
7. Silage reduces the cost of production of milk, beef and mutton.
8. It will increase the milk flow.
9. Silage promotes the health of the herd.
10. The silo provides an economical method for the storage of roughage.

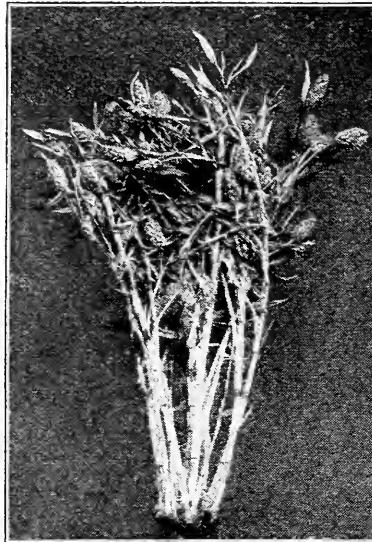
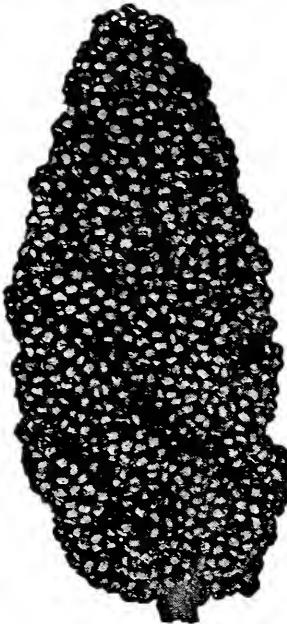
Non-Saccharine Sorghum for Grain and Forage

All prices are subject to market change

If large quantities are wanted by mail send the necessary postage. See inside front cover page.

A & M Selected Dwarf Milo Maize heads the list for grain, Yolo and Feterita are close seconds. These crops are given special mention because being drouth-resistant they grow very well in the southwest.

Non-saccharine Sorghums follow in choice for silage with Dwarf Milo in the lead because of the enormous yield of grain adding much to the value of the silage. These should be cut after the seed is hard, never when green.



Actual Photograph Dwarf Milo Maize
6,000 lbs. of grain per acre.

57 Heads on This One Stool of Dwarf Milo
Grown by Wm. Kruger, Woodlake, Cal.

A & M Selected Dwarf Milo Maize

ASK FOR OUR FREE BULLETIN

The King of all Sorghums for Grain. Is much preferred to the tall variety because it stools wonderfully and matures a large head of seed on each stool, producing 3500 pounds of grain per acre, and the stalk being shorter and having more foliage, makes it more desirable for fodder. Dairymen find that the cows will give more and richer milk when fed on it. It is the right crop to plant in young orchards because it will not shade the small trees.

A & M Dwarf Milo Maize is grown from selected stock. For many years the heads were carefully selected in the field before harvesting. Now we have a strain that grows about four feet high and produces forty per cent more than it did three years ago under the same climatic and soil conditions.

It is highly recommended by the State Department of Agriculture for silage. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Feterita Of the many non-saccharine sorghums offered in this book—none have proven more popular from the start than Feterita, on account of its astonishing growth after it becomes well rooted. Every testimonial received expresses astonishment at its rapid growth.

Sow 12 pounds of seed per acre drilled two feet apart; by so doing it yields 5000 to 6000 pounds of grain per acre.

The grain has about the same feeding value as Egyptian Corn or Milo Maize; yields from two to three tons of grain per acre. The seed is more susceptible to cold than other sorghums, therefore should not be planted so early, nor should it be planted in cold soil.

The second growth stools wonderfully, producing several tons of excellent forage for pasture or for ensilage after the seed has been harvested. It thrives luxuriantly on soil so alkaline that field corn will not thrive. The heads are upright. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Higara Similar in appearance to White Kafir but is more prolific; the grains are somewhat larger and are eaten more greedily by stock and poultry. It grows about six feet tall and stands upright. It is easily harvested and will yield four to six thousand pounds of grain per acre. It is very popular in Arizona and in the Imperial Valley. (Per lb. 25c) (10 lbs. \$2.00) postpaid.

Read This

Gentlemen:—

I want to thank you for your letter of May 24th. I have delayed writing until I could tell you the result of your advice in regard to the wire worm in the corn. I sprinkled lime about the young corn of one row without much benefit. Next I sprinkled it on the second row before it had sprouted with comparatively few cases of the worm. With the third row I dug the lime into the soil before planting and then sprinkled the surface. Result, only one solitary wire worm and the best row of corn I have had this season.

Yours truly,
W. W. LOCKWOOD.

Kafir Corn Grows similar to the Milo Maize except the head is upright instead of hanging over like Milo Maize and Egyptian Corn. It will yield two to three thousand pounds of grain per acre. Sow 8 pounds of seed per acre drilled. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Shallu At our demonstration, Shallu tillered more than any other sorghum except the Wonder Forage Plant. The second growth was particularly fine. We would place Shallu at the head of the non-saccharine sorghums were it not for the destruction of seed by birds. It is hardly possible to harvest a crop of seed where birds are at all numerous. For green feed it is hard to excel.

Shallu will thrive luxuriantly in extreme Alkaline soils.

Both the green stalks or the ripe grain are greedily eaten by all kinds of stock from horses to chickens.

(Per lb. 25c) (10 lbs. \$2.00) Write for quantity price.

Mr. de Venelle: "I planted 15 pounds of your Shallu and harvested 1900 lbs. of grain and 50 tons of fodder, without irrigation."



A & M Yolo

Yolo There has long been a demand for a grain sorghum that could be harvested with a header. Thanks to the California State College of Agriculture, Davis, Cal., we have the new non-saccharine sorghum called White Yolo. The picture illustrates it very well. On soil that is favorable it attains a uniform height of about three and a half feet. With the header set at two and a half feet high, practically every head would be harvested.

It stools from the ground, has no branches. The stools are stocky and leafy and as many as twelve to a plant. The tonnage of forage per acre must be excessive when considering the height. It has more sugar than Milo. The grain is white. We do not hesitate to recommend it. (Per lb. 40c) (10 lbs. \$3.50) prepaid. Write for quantity price.

YOLO—THE CROP THAT WAS MADE TO SUIT THE HARVESTER

Mr. H. H. Cone of Elsinore reports the following on White Yolo:

It is a grain sorghum similar to Durra which has been bred up by the experimental stations principally for the purpose of producing a grain that might be headed by machinery. It grows four to five feet high on a straight stalk and it heads upright; does not stool to any great extent and produces a very satisfactory grain for chicken feed or for any other purpose for which Milo Maize and similar grain sorghums are used.

It requires little water on that account, is especially desirable for dry land farming.

It produces as much grain as Milo Maize.

The stalks are palatable and contain sufficient sugar to make it a desirable forage.

Mr. Cone planted half a pound to the acre and on four acres produced approximately 10,000 pounds of threshed grain.

The heads are quite compact and the grain does not shatter readily which is another desirable feature.

WHEN TO HARVEST SORGHUMS FOR SILAGE

Many farmers are growing sorghum for silage. The question of when to cut it is perplexing some. The experience of farmers who have grown this crop for silage purposes is that it should be fairly mature before cutting. The stalks may look rather dry, but Sorghums should not be cut for silage until the seeds are hard. If cut too early the silage is apt to be acid and much inferior to silage cut at the right time.

BEST CROPS FOR SILAGE

Indian corn heads the list as recommended by the Dept. of Agriculture. The varieties that exceed in tonnage yield per acre are: Orange County Prolific, Eureka Ensilage, Mexican June (Sacaton) and Hickory King.

A & M Field Corn



Orange County Prolific

The Stock Yard—What It Means

Now Mr. Farmer do you realize that the thousands of animals brought to this stock yard must be fed the best of high grade feed in order to keep them in good condition. Do you realize the enormous market there will be for all the corn you grow?

Grow more forage for the silo, and grow more corn for the grain.

Mr. Farmer if you have good corn land, GROW MORE CORN!

The safest varieties of corn you can grow without irrigation are the King of the Earlies, Mexican June and King Philip. With irrigation grow Orange County Prolific.

ORANGE COUNTY PROLIFIC

THE MOST SATISFACTORY SILAGE CORN

Orange County Prolific was introduced by us in 1911. At that time we had stalks on exhibition with nine ears of commercial size and others that were smaller.

The season just past indicates, by numerous testimonials, that Orange County Prolific corn leads all other varieties both for corn or silage. From Arizona where the sacaton June Corn is considered the only corn for that state, we have a letter from Mr. Joyce saying—"The Orange County Prolific produced more and better corn than the June." Orange County Prolific will give you more and better silage than any other corn. It is the most satisfactory variety to grow for the silo.

We have a report that the Orange County Prolific planted July 25th produced 28 tons per acre. (Per lb. 20c) (10 lbs. \$2.00) postpaid. Write for quantity prices.

Dear Sir:

"I would like to let you know that from your seed of Orange County Prolific, we cut 105 tons of ensilage from 3½ acres. Some of the stalks are as high as 18 feet."

NICHOLAS KNOPP. Calif.

Eureka Ensilage (White Dent)

This variety is also a favorite for the silo. But some objection has been expressed, that the stalks are too large to be handled conveniently. This would indicate that it had been grown on very rich soil. It is very stalky and stands up well. The tonnage of silage per acre will average well above 20 and may yield 30 tons. Any claim above this is based upon individual acreage. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Imperial Ensilage A yellow Dent Variety that produces very long ears of 12 rows. It is a rank grower and very satisfactory for the silo. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Mexican June The corn for the arid southwest. When the white man was a pioneer in Arizona and New Mexico, he tried to grow corn but failed. The country and climate were condemned; corn could not be grown, but thanks to the good work of the various state and federal experiment stations, we have the Mexican June. This has been bred up by years of selection from seed which has existed among the Indians from time antedating the Aztecs. Imperial Valley growers realized its merits ten years ago. In Arizona, New Mexico and Texas, it is now grown where no other variety will thrive. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

A NEW CONDITION

That Governs the Price of Seed Corn

Since the coming of the silo a new condition has come upon us. Before the silo, corn was valued according to the yield of grain and the various varieties were gauged from that point of view, but since the coming of the silo varieties are valued according to the tonnage of silage they will produce.

The silo has caused an enormous increase in acreage planted to corn, but a deplorable scarcity in the supply of locally grown corn for seed.

It is true the Southwest can import corn for feed, but we should grow enough for both feed and seed. The farmer says: "I can grow silage and get more money per acre; I can buy my seed cheaper than I can raise it."

You can grow a field of corn for silage and harvest the crop from thirty to forty days less time than required to mature grain, thereby releasing the ground for a fall crop. A very important phase to consider at planting time.

The result is a scarcity of seed corn, particularly those silage varieties which we cannot import.

CORN FOR GRAIN

We offer many sure and big yieders, but your selection should be governed by your local conditions. For dry farming, we recommend: Pride of the North, King of the Earlies, Mexican June and King Philip.

For big yield where irrigation is available we recommend all of the varieties listed here, with special stress upon Reid's Yellow Dent for yellow corn and Orange County Prolific for white corn.

Do not overlook the fact that Orange County Prolific is a leader in yield of grain as well as silage.

All varieties listed below: (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

WHITE DENT

Hickory King	110 days
Champion White Pearl	110 days
Iowa Silver Mine	110 days
Wisconsin White Dent	110 days

YELLOW DENT

Reid's Yellow Dent	100 days
Pride of the North	90 days
King of the Earlies	90 days
King Philip Flint	90 days

Sweet Corn for Dairy Cows

For this purpose we offer Stowell's Ever-green. It will grow more green feed than any other sweet corn. Seed is usually scarce and the price governed by the supply. Drill 40 pounds of seed per acre. If interested write for price.

About Corn—More than 5,000,000 bushels of corn was produced in California in 1919, yet this is scarcely half enough to meet the local demand. This condition ought not exist because there is ample acreage where corn may be grown under irrigation, and near the Coast where it may be grown without irrigation. Where corn cannot be irrigated plant the "King of the Earlies" and "Mexican June" and "King Philip Flint."

CORN AND SORGHUM TOGETHER

Two good feed crops at once are grown by Sherman Wood of Monterey county for one to follow the other. Sorghum is planted between the corn rows when the latter is 18 to 24 inches tall. After the corn is off, the sorghum makes fine pasture,

Millet

Write for quantity prices on all varieties
Culture same as for Sorghum. Sow from April 15th to Aug. 1st.
Millets would be grown more extensively were it not for the destruction by birds.
Therefore in order to get best results it is important that you plant the variety best suited to your purpose.



40 Acres Broom Corn Millet Grown by S. A. Munnick

Broom Corn Millet This variety is grown very extensively throughout the middle west. It yields enormously of grain for poultry and hogs. As you can see by the picture that it will grow several tons of hay per acre and produce two cuttings a season. It is a summer crop and requires very little moisture. (Per lb. 25c) (10 lbs. \$2.00) postpaid.

Mr. Munnich harvested from 7½ acres 7½ tons of seed and 6 tons of hay. The seed was heavier than the hay.

He says it matured within eight weeks. It requires very little moisture. It is a good summer crop to grow for hay when barley hay is scarce. It is the best crop to sow for a nurse crop for alfalfa when there is danger from drifting sands. There is no better summer crop to grow without irrigation whether for pasture or for hay.

Sow 20 pounds per acre.

Russian, or Hog If moisture is lacking and you need pasture in the shortest space of time, plant Red Russian or Hog Millet; there is a very slight difference, and both may be pastured within six weeks; both mature seed within sixty days. It grows three to four feet tall. This seed may be harvested by heading and a second crop will mature within another thirty days. We recommend it for a quick temporary pasture. (Per lb. 25c) (10 lbs. \$2.00) postpaid.

Japanese Grows rapidly four or five feet tall, branches freely with liberal foliage, matures seed within seventy-five days, seeds freely. We recommend it for early pasture or to cut repeatedly for hay. (Per lb. 25c) (10 lbs. \$2.00) postpaid.

Golden or German Grows three to four feet tall, branches freely and is enormously prolific of seed. The heads are covered with small bristles. Where birds can be controlled this is probably the best variety to grow for seed. Where moisture is scarce this is a very good variety to grow for pasture. (Per lb. 25c) (10 lbs. \$2.00) postpaid.

Pearl or Pencilaria Grows eight to ten feet tall having heads eight to ten inches long, prolific of seed that is hard and not eaten greedily by any kind of stock. When young the enormous growth of foliage is succulent, but becomes coarse and objectionable and should be silaged before feeding.

We recommend this variety for green feed to cut when two to three feet tall. It is eaten greedily by all stock. (Per lb. 35c)

SUNFLOWER



Plant Sunflower for Windbreak

Sunflower stalks are rich in potash, plow them under, do not waste them.

Mammoth Russian Should be planted largely for seed or silage. It makes a good windbreak around your garden. It is a valuable plant that grows anywhere with little attention. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

SEED FOR BIRDS

Rape Thousands of sacks of rape seed are imported each year, while it grows wild in some localities of Southern California. It is a profitable and easy crop to grow and harvest. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Canary This can be grown quite successfully here. It is just as easily grown as barley, and requires the same cultural treatment. Several carloads are imported each year into Los Angeles. The consumption throughout the United States is enormous. All of this could be grown in California. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Hemp What has been said here of Canary is applicable also to Hemp. It is easily grown and requires about 100 days to mature a crop. It requires sixty pounds of seed to plant an acre, and should be sown in February. (Per lb. 25c) (10 lbs. \$2.00) postpaid. Write for quantity price.

Sunflower The principal food for parrots. (Per lb. 25c) (10 lbs. \$2.00) postpaid.

Mixed Seed for Canaries

Our Bird Seed is Fresh We buy it in car lots and mix it to proper proportions making a well balanced feed.

When you feed A & M bird seed you have no sick birds. (Per lb. 15c) (10 lbs. \$1.25) f. o. b. here. Write for quantity price.

Hemp is Used to Destroy Noxious Weeds

Experiments Show That Hemp Will Destroy Such Weeds as Quack Grass and Canada Thistle

Use of Hemp for the destruction of weeds on farms is strongly advocated by Lyster H. Dewey, botanist in charge of fiber-plant investigations of the Department of Agriculture. "Very few of the common weeds troublesome on the farm can survive a dense shade of a good crop of hemp. A good dense crop, six feet or more in height, will leave the ground practically free from weeds at harvest time. In Wisconsin, Canada thistle has been completely killed and quack-grass severely checked by one crop of hemp. Some vines, like the wild morning-glory and bind-weed climb up the hemp stalks and secure light enough for growth, but low-growing weeds can not live in a hemp field."

Treating Grain Seed for Smut

1. Dissolve 1 pound of bluestone (copper sulphate) in 4 gallons of water, which must be held in a wooden trough or tub.
2. Dip the seed, contained in half sacks or butts, for three to five minutes in the bluestone solution. Shake out the air as the sacks soak.
3. Drain the sacks for fifteen minutes, and then dip in lime solution, prepared by slackening 1 pound of quicklime in 8 gallons of water. If the lime solution becomes blue, replenish with a new solution.
4. Dry thoroughly before storing.

When barley is treated with this solution, or when the lime dip is not used after the bluestone treatment, use 1 pound of bluestone to 5 gallons of water. Wash seed in water before dipping in bluestone where the lime dip is omitted.

Before dipping the seed in bluestone the smutballs must be washed out by pouring the wheat slowly into water and stirring it, when the balls may be skimmed off the surface.

Barley as a Winter Pasture

Several other plants furnish good winter pasture, but none are so valuable as Barley. It affords grazing earlier, and more abundantly. It recovers more rapidly after being grazed down. It is more relished by stock and more wholesome. It stands up so that stock can eat it with less dirt or other objectionable matter, and it is never affected by rust.

Sown in September it affords good grazing until May, but if the stock are taken off in March, a good crop of grain can be harvested.

For this purpose sow 100 pounds per acre and irrigate if needed.

Barley sown in an alfalfa field during October will make good pasture during the winter when alfalfa is dormant, or it may be grown for hay without injury to the alfalfa.

GUARANTEE—Complaints that seeds are not of good germination might quite as often be attributed to other causes than the quality of seed. There are many contingencies arising to prevent the best seed giving satisfaction, such as plowing too deeply, too shallow, in too wet or too dry a soil, insects may destroy the plants as soon as or before they appear, wet weather, cold weather, frosts, chemical changes in the seed bed induced by temperature, etc. For many reasons it is impracticable to guarantee seed under all circumstances, therefore the Aggeler & Musser Seed Company give no warranty, expressed or implied as to description, quality, productiveness or any other matter of any seeds, bulbs, plants or trees they send out, and they will not be responsible in any way for the crop. If the purchaser does not accept the goods on these terms, they are at once to be returned.

Grain and Field Crops

When field seeds are desired by mail, add the required postage.
See inside front cover page.

Write for quantity prices on all grains.

With our up-to-date facilities for cleaning all kinds of seed, we aim to have all field seeds as clean and free from foul seeds as it is possible to make them.

Grain and other field seeds that pass in the open market as clean will often show ten per cent or more of broken grain, foul seeds, chaff and dirt. Should our prices appear higher than others, you will find upon investigation that they are cheaper, because of the purity of the seed.

Legal Weights—Pounds per Bushel

Barley	48	Clover Seed	60	Potatoes	60
Beans	60	Millet	50	Rye	55
Corn	56	Oats	32	Wheat	60

Write the Department of Agriculture, Washington, D. C. Ask for Farmer's Bulletin 939. Subject: "Cereal Smuts and the Disinfection of Seed Grain."

BARLEY

Sow 50 to 60 Pounds per acre.

We aim always to have the best it is possible to procure. We cannot fix a price because of the fluctuations of the market. Bearded Barley, Beardless Barley and Baid Barley. Write for prices.

TRY THIS

One rancher whose name we cannot recall, told us that he sows his barley early and cuts it three times for hay; each time before the heads appear, and then allows it to head out for grain. Try it.

OATS

Sow 70 to 100 Pounds per Acre

Texas Red (Rust Proof)—This is the only variety that is profitable to plant here. We have this on hand during the planting season.

Texas Red Oats—Grown in Texas.

Texas Red Oats—Grown in California. Write for prices.

WHEAT

Sow 50 Pounds per acre.

Defiance One big drawback against growing wheat in California has been rust, but this has been largely overcome by planting the Defiance variety where cool, moist weather conditions prevail. This variety is practically rust-proof.

Defiance is a late wheat and should be planted early and seeded thin. It is non-shattering and classed as a hard white wheat, and number one for milling.

Sonora This variety is recommended because of its large yield, earliness and drouth resistance. It is susceptible to rust and inclined to shatter, but it has long been a standard variety in Southern California back from the coast. It is classed as a soft white wheat.

Early Baart Early Baart Wheat is the right variety for the interior valleys. Favorable reports have come from San Joaquin and Imperial indicating that this variety will yield 20 sacks per acre under dry conditions that would impair other crops.

More acreage will be planted to this variety because it is no longer an experiment; it has demonstrated that it will out-yield other varieties for dry farming.

Dwarf Essex Rape

Pasture for Hogs, Sheep and Poultry

There is a need and a place for an extra quick growing green forage crop for use any time during fall, winter and spring, and our Dwarf Essex Rape fills that need exactly.

Rape can never become a pest as it belongs to the same general family as the turnip and rutabaga, and when planted under favorable conditions of soil and season, it makes an immense crop of green forage, juicy and succulent, and often at a time of year when little green feed is available.

(Per lb. 30c) (10 lbs. \$2.50) postpaid. Write for quantity price.

Read

The most dangerous offenders of the pure seed laws are irresponsible growers who gather seed from surplus crops regardless of any conditions surrounding the growth, and have no facilities for cleaning, and will offer the seed by the wayside to anyone who will purchase it.

Mr. Planter, we advise that you get a strong microscope and with it examines any seed before you buy. You will then not hesitate to pay the higher price for clean seed. When you go to the store for your seed, ask for A & M Reliable Seeds; they are pure and clean.

It is important that growers give attention to the description in this catalog in order that they will plant the grain best suited to their locality with regards to soil and climatic conditions.

Russian Flax Will undoubtedly grow as luxuriantly in the Imperial and San Joaquin Valleys as it does in San Luis Obispo County, where it is at its best, and yields about two tons of seed per acre. Sow 40 pounds of seed per acre. It requires the same culture as barley.

(Per lb. 30c) (10 lbs. \$2.50) postpaid. Write for quantity price.

RICE

If interested write to U. S. Department of Agriculture, Washington, D. C., for Farmer's Bulletin No. 688, and Circular No. 97.

The variety now accepted as the best for California, is the Wataribune, an early variety imported from Japan.

(Per lb. 25c) (10 lbs. \$2.00) postpaid.

Rice is now grown in such widely distributed territory throughout California that it is evident we have the climate and it is only a matter of local condition. Therefore, if you have clay hard-pan soil with duck-ponds and tule, just grade it so it can be flooded, and sow rice. Apparently the more alkali the better.

To grow rice successfully necessitates a pond, or reservoir that the water may attain a higher temperature than is usual for fresh water, when applied to the rice field.

RYE

Sow 60 Pounds per Acre.

Although Rye is sown largely for early winter pastures, green manuring and a limited acreage for the straw, it should be grown more largely for the grain, which is now in great demand. Write for prices.

Winter Rye Write for prices.

BROOM CORN

Grow more Broom Corn, but first make a contract with one of the factories to buy your crop. Unless you are familiar with growing it, first try a small acreage. Ask for our circular on Broom Corn.

Dwarf Evergreen This is the standard because it is easily harvested and in quality there is none better. It is the best to plant throughout the Southwest. (Per lb. 25c) (10 lbs. \$2.50) postpaid. Write for quantity price.

BUCKWHEAT

Common The soil is always moist where shaded with buckwheat. Sow the seed any time after April 1st, about 45 pounds per acre. Within ten weeks it will have matured. It will not survive the winter. Therefore it is necessary to sow once a year.

We highly recommend the growing of Buckwheat for reclaiming desert land, as it will start a growth and produce a crop under more adverse conditions than any other crop we know of.

(Per lb. 25c) (10 lbs. \$2.00) postpaid. Quantity price on application.

COTTON

Pure Pedigreed Seed All the seed we offer will have the approval of the proper horticultural inspectors. Therefore, you need not hesitate to order our seed. Write us stating what variety you want. We will then quote the price giving a pedigree of the seed offered, and the place where it was grown.

We offer the following varieties: Durango, Pima, Acala. Write for price.

TOBACCO

Grow your own smoking tobacco

Poultrymen, grow tobacco for your hen houses

If interested consult us about the culture. One ounce of seed is sufficient to plant an acre.

Pennsylvania Broad-leaf The largest known variety. At our demonstration plot we grew leaves that measured 40 inches long, 28 inches wide. In Pennsylvania this variety developed leaves 44 inches long and 36 inches wide. It is the best variety to grow in the home garden for use in the chicken house or other insecticide purpose. Also if handled properly makes a good smoking tobacco for the pipe. (Pkt. 10c) (oz. 50c)

Acclimated Havana For quality this is the very best. (Pkt. 10c) (oz. 50c)

Tobacco Culture in California

It is true we can grow tobacco just as luxuriantly in California as elsewhere. It has been repeatedly tried in various sections of the state but at no place did the experiment extend to the third year. California cannot cure a fine grade of tobacco. The cause may be our lack of rain to wash off the gum or it may be the dry atmosphere, or our lack of frost.

However, a fairly good smoking tobacco is made by carefully drying the leaves in a shed.

A NEW INDUSTRY

The Southern California Cordage Company, the first twine and rope manufacturing establishment in Los Angeles, and declared to be one of the most modern and largest in the West, is to be constructed at once at Los Angeles Harbor.

The capacity output of the plant will be 150 tons a month.

The fibers and other raw products will be shipped here by water from Manilla, Mexico and the Orient.

Mr. Farmer this Southern California Cordage Company sounds good, but why the necessity to import the raw material, when it grows like weeds along the Colorado River and Imperial Valleys? It just grows naturally like weeds.

This is a worthy subject for investigation. The crops to grow this raw material are Hemp, Sesbania, Flax and Henequen.

Inoculate Your
Alfalfa, Clovers, Cow Peas, Soy Beans, Vetches
and
Other Legume Crops
WITH
Mulford Cultures
FOR LEGUMES

Small Cost Large Returns Easy to Use No Labor Expense

Mulford Cultures contain pure, tested strains of active, vigorous nitrogen-fixing bacteria, for inoculating seeds of legumes or soil.

Mulford Cultures are scientifically prepared and tested with the utmost care and skill. Enormous numbers of these very valuable and desirable bacteria are thus available to you in every package of Mulford Culture and may readily be applied to your seed. The sealed bottle insures purity.

Legumes offer the best known means of maintaining soil fertility and rejuvenating over-cropped and worn-out fields. They add both humus and nitrogen to your soil and thus increase your yield of wheat, cotton, corn and other non-legume crops.



Alfalfa plant on left not inoculated. Plant on right inoculated with Mulford Culture for Alfalfa. All other conditions identical. This contrast speaks for itself.

Always specify on your order what crop you want to inoculate, as there is a different strain of bacteria for each legume.

Alfalfa	Vetch	5-Acre Size	\$5.00
Crimson Clover	Velvet Beans	1-Acre Size	1.50
Sweet Clover	Sweet Peas	1/4-Acre Size .....	.75
Red Clover	Garden Peas	Small Size (Supplied only in four varieties, for Garden Peas, Garden Beans, Lima Beans and Sweet Peas.....	.35
Alsike Clover	Garden Beans		
Burr Clover	Lima Beans		
Cow Peas	Lespedeza		
Soy Beans	Beggars Weed		
Peanuts	and others		

SPECIAL NOTE

The quantity of bacteria furnished in the Mulford Cultures is based on the area or acreage to be inoculated and we recommend that, for best results, the cultures be used on this basis. You will find it the most economical and effective plan, in the long run.

In the case of some crops, which are sown with a comparatively small amount of seed per acre, there is sufficient Mulford Culture in a package to inoculate seed for two or three times the acreage indicated on the label.

If you are willing to risk the success of your crop by spreading the culture more thinly over a larger area, you will find Mulford Cultures to be the most economical form of legume inoculation on the market.

FREE DESCRIPTIVE FOLDER SENT UPON REQUEST

LEGUME NITROGEN

By Charles A. Whittle

An effort has been made to catalog the results of legume green manuring under field conditions, wherever found. The records of the actual crop increases are taken and the pounds of nitrogen contained in the increase are computed. This will show the actual ability of the legume to supply nitrogen plant food.

It is well established that legume bacteria are more efficient on poor than on rich soils.

It has been discovered that acid soils depress the activity of the bacteria and that an application of lime will overcome the acidity and thereby promote bacterial life.

It has also been found that some soils are deficient in active legume bacteria. To make up for this lack, it has been found that bacteria grown in laboratories, and applied to the legume seed before planting, will promote the maximum development of nodules.

So beneficial a bacterium, of course, merits thorough investigation to the end that it may be made to operate with the greatest efficiency.

California Experiment Station (Bulletin 292) reports eight years' results where legumes were grown annually and turned under. The legume plots were checked against plots that were green manured with non-legume crops. In these experiments there was an annual average increase in corn amounting to 14 bushels, which amount contains 12.93 pounds of nitrogen. There was also an annual average increase of 62 bushels of potatoes which contain 12 pounds of nitrogen.

New Jersey Experiment Station (Bulletin 289) records the results of four years of wheat after soy beans, obtaining an average annual recovery of 54 pounds increase in nitrogen in the crops. In the same bulletin it is stated that the legume manure furnished at least as much nitrogen as 15 tons of manure.

Illinois Experiment Station (Bulletin 76) records that alfalfa has taken from the air 42.23 pounds, 41.82 pounds and 53.65 pounds of nitrogen, and states that these amounts are slightly more than one-third of the plant's total nitrogen.

Experiments just concluded on the Tillotson Fruit Ranch just west of Calinatria in Imperial Valley, with cover crops, have proved successful, according to V. C. Barber, manager of the ranch. Several varieties of peas and beans, including the Mong bean, Sesbania or wild hemp and cowpeas, were planted last spring under the supervision of the Imperial County Farm Bureau, and Farm Adviser, E. L. Garthwaite made tests

of the various plants and of the nature of soil in which they were grown. Some of the Cow peas had vines over eight feet long and they all made remarkable growth in sixty days. Mr. Barber feels that the cover crop will not only be of great benefit to the young grapefruit grove in which it was planted, but he believes that it saved the young trees from damage from the crickets. These destructive insects have been particularly bad this year, but instead of eating the leaves of the trees as they did in other groves, they dined heartily on the cow peas.

The planting of cover crops has been given a great impetus the last year with the appointment of a committee which has held meetings in every town in the valley carrying the gospel of green fertilization to the farmers. Many instances have been reported of its success. Nor is the green fertilizer of any prescribed kind. Many farmers raised better crops on the land where the frosted peas were turned under two years ago.

HUNGARIAN VETCH

SOMETHING NOT GENERALLY KNOWN

We have had some inquiry for Hungarian Vetch and not being familiar with this variety we wrote to our grower and here we print the reply:

Gentlemen:

In reply to your letter regarding Hungarian Vetch would say in describing it that it has a white blossom, is a very hardy vetch and yields about the same as common vetch in forage but yields more seed. We like it much better than common vetch because it is so hardy and will grow on wetter land, also it is aphid-resistant which is a big advantage here on the average.

Another thing, the pods of Hungarian do not shatter as do the other vetches; pods will lie out on the ground clear up until the fall rains come even then without shattering the seed. The Hungarian seed is smaller and the vetch stools well so that with early sowing an excellent stand can be obtained from light seeding.

I had one five acre piece that yielded over 1,200 pounds of seed to the acre after it was recleaned, having seeded only 23 pounds per acre. Comparing it with Purple Vetch, it is much harder, here we lose Purple Vetch about every fourth year due to freezing while the Hungarian is not damaged in any way.

Hungarian as will the others, responds readily to light applications of land plaster, from thirty to fifty pounds to the acre will work wonders. We received from three to three and one-half tons to the acre of hay from it last year. The purple is less palatable as a forage plant.

Price (per lb. 30c) (10 lbs. \$2.50) postpaid.

FERTILIZERS

WRITE FOR QUANTITY PRICE

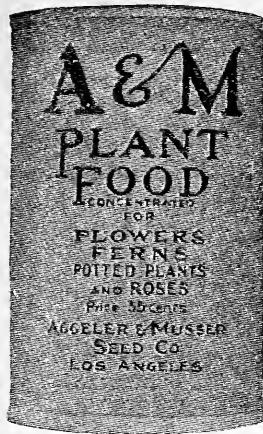
A & M PLANT FOOD

For Flowers, Ferns, Potted Plants
and Roses

This concentrated plant food should be used by all who grow plants of any kind in pots, such as Ferns, hanging baskets, also for roses and in window boxes.

You have, no doubt, often noticed pale and sickly looking foliage on your plants. A & M Plant Food will restore the color and promote the growth.

It is packed in a convenient, sealed 2-pound package. Will not deteriorate after being opened and, very important, it can be kept in the house without discomfort. If covered, there will be no disagreeable odor. Per package, 35 cents., f. o. b. Los Angeles.



A & M LAWN AND GARDEN FERTILIZER

Quick and Lasting Results
A & M Lawn and Garden Fertilizer is a scientifically prepared chemical compound carrying the necessary elements for the promotion of plant growth.

It not only enhances the beauty of the blossom and the color of the lawn, but it is a wonderful stimulant to vegetable life, and, in addition to its many uses in the garden, it can be applied with wonderful results in the field for vegetables and other crops.

This fertilizer is easy to apply and it is in powder form and quickly available.

For the convenience of our customers we have it packed in 25-pound, 50 pound and 100-pound bags, priced as follows:

25 pounds	\$1.10
50 pounds	2.00
100 pounds	3.75

F. O. B. Los Angeles



SULPHUR For All Purposes to Increase Crop Yields

Experiments conducted during the past few years by noted soil chemists and practical cultivators have revealed that sulphur:

1. Is readily utilized by plants as stimulating food.

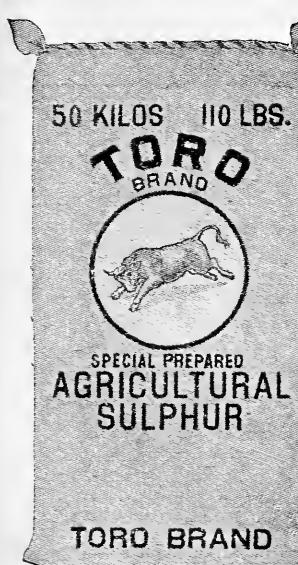
2. It improves alkali soils by neutralizing the alkali which rises to the surface or which is carried in by the irrigation water.

3. Promotes nitrification: Dr. F. C. Reimer, in Oregon Agricultural Bulletin No. 163 says, "The various sulphur fertilizers have a very stimulative effect on the root system, increasing its size and the number of nodules. This is of great value in taking up larger quantities of plant food, moisture and atmospheric nitrogen."

4. Transforms latent potash and phosphates into available plant food.

5. Increases protein and feeding value of crops.

6. Destroys the spores of fungi and the larvae of injurious insects in the soil. Prevents Potato Scab, Wire Worms, Eel Worms or Nematodes, etc.



Drill into the soil two sacks per acre of "Toro Brand" specially prepared agricultural sulphur.

Time to Apply "TORO BRAND" should be worked into the soil in late fall and early spring in order to get the benefit of winter and early spring rains. However, in the irrigated districts it may be applied at any time of the year.

Price per sack of 110 lbs.: 1 sack lot, \$4.10; 5 sack lot, \$4.00; 10 sack lot \$3.90; f. o. b. Los Angeles.

Fertilizers in Small Gardens

Amateur garden makers are often puzzled as to the amount of fertilizer needed for their small plots, because the usual directions give only the amount per acre. The following table shows (approximately) the proper proportions:

100 lbs. per acre equals 1 lb. for a plot 10x43 feet.
200 lbs. per acre equals 1 lb. for a plot 10x21 feet.
300 lbs. per acre equals 1 lb. for a plot 10x14 feet.
400 lbs. per acre equals 1 lb. for a plot 10x11 feet.
500 lbs. per acre equals 1 lb. for a plot 10x 9 feet.

Agricultural Hydrated Lime

It supplies the element calcium to plants; it makes "sour soil sweet," changes an acid condition to a slightly alkaline one; it has the power to shrink clay and adobe soils, making a larger number of crumbs from a sticky mass; it prevents packing, baking and cracking, makes cultivating easier; it promotes the normal decay of organic matter in the soil, preventing the accumulation of poisonous matter; it promotes the change of nitrogen in organic matter into available nitrates, liberates and places at the disposal of plants potash and phosphoric acid already in the soil. It destroys fungus and the germs of insect life that infest the soil. Hydrated Lime, because of its fineness, high calcium contents concentrated condition, is the ideal agricultural lime and the most economical on the market. Use one-half less than other forms of lime. In cloth sacks weighing approximately 80 pounds. (4-lb. carton 25c) (Per sack \$1.50) Write for prices in ton and carload lots.

Fish Fertilizer This fertilizer is composed of dried fish, finely ground, and is purely organic. An excellent fertilizer for all crops. Will last for several crops without the need of other fertilizer. Write for prices.

Dried Blood Meal Is very rich in nitrogen and an excellent plant-food for increasing the yield of vegetables and fruit, and also for stimulating the growth of flowers. There is from 12 to 13% nitrogen. Write for price.

Bone Meal 3½% nitrogen and 16% phosphoric acid. Neither of these two elements are immediate in their action. If put in the soil in the Fall, some results will show the following Spring. Slow but sure. Write for price.

Nitrate of Soda Contains about 15% nitrogen. Is very quick in action and entirely soluble. Is best applied after the plants are growing. Price fluctuates. Write for prices.

Leaf Mould Excellent for mixing with soil for potted house-plants, especially ferns of all kinds. (per sack \$1.25) f. o. b. Los Angeles.

Gypsum This is not a fertilizer, yet it has an indirect fertilizing value, which is mainly due to the fact that it has the power of changing unavailable forms of plant-food, especially potash, into available forms. A heavy dressing of Gypsum will greatly improve any heavy soil, rendering it lighter and more easily cultivated, and relieve the tendency to crust and bake. If your soil contains alkali or is sour, use Gypsum. (Per 100 lbs. \$1.25). Write for quantity prices.

Sheep Manure For lawns, gardens, window boxes, potted plants and flower beds. (Per 10 lbs. 50c) (50 lbs. \$1.10) (100 lbs. \$2.00) f. o. b. Los Angeles.

AMMONIUM SULPHATE

A Nitrogen Fertilizer

Ammonium Sulphate is a natural by-product of Coke Ovens. It has been known as a high grade carrier of Nitrogen for about fifty years.

Some idea as to the value of Ammonium Sulphate as a nitrogen carrier may be obtained by the fact that to equal 100% of Ammonium Sulphate in nitrogen content, it would take: 100 pounds Nitrate of Soda or 290 pounds Cotton Seed Meal or 1,650 pounds of ordinary fertilizer or 4,000 pounds of good stable manure.

For Garden use, rake the soil 1 pound to every 150 square feet. One pound is sufficient for any 1 year old tree or 1½ pound for a 2 year old tree. For field crops apply 100 pounds per acre. (25 lbs. \$1.75) (50 lbs. \$3.00) (100 lbs. \$5.75).

Super-phosphate (25 lbs. 65c) (50 lbs. \$1.20) (100 lbs. \$2.25). Write for quantity price.

"Hints to Potato Growers," published by the Potato Growers Association of New Jersey, July issue, reporting the checking up of various fields where Sulphur was used, reads, viz:

Sulphur Gives Good Results

"The next stop was made at Carlton Moore's to examine the sulphur test. The field in which this work was conducted grew very scabby potatoes last year. Sulphur was applied this spring at the rate of 300 and 600 pounds per acre. Enough of each plot was dug to show that the sulphur applications had given very good control of scab. On the rows receiving no sulphur only 20 per cent of the crop was clean as compared with 80 per cent on the rows where the sulphur was applied.

"On the Alfred Sloan farm where the next stop was made, the results were just as striking. On rows receiving no sulphur a large per cent of the crop was severely scabbed while on adjoining rows treated with 500 pounds of sulphur by Mr. Sloan there were very few scabby tubers."

All Year Treatment Against Insects and Disease Enemies of Garden and Grove

For prices and list of insecticides refer to insecticide page. Your particular attention is directed to Nico Dust Preparations and Sherwin Williams Insecticides for the control of garden and orchard pests. These preparations are used extensively by experienced growers, and are highly satisfactory.

ROSES

Rose Aphis In spring and summer spray with solution twenty drops Black Leaf 40 to one quart of fish oil soap and water, or one part Kils-All to twenty parts of water.

Rose Scale and Fungus Spray with solution one part Spra-Mulsion to ten parts water.

Thrip Spray with one part Kils-All to twenty parts water.

Mildew Spray with Fungi-Bordo. Follow directions on package.

HOUSE PLANTS

Fertilizing Apply a teaspoonful of A & M Plant Food once a week. Do not allow the plant to stand in water. Give it plenty of fresh air and sunshine.

Fern Scale Spray with Kils-All. The best time is during the cool of the evening. Do not set the plant in the sun immediately after spraying.

VEGETABLES

Asparagus Rust Spray with Dry Lime Sulphur or Fungi Bordo. Use according to directions on package.

Scant Foliage Indication that soil is worn out. Apply A & M Lawn and Garden Fertilizer.

Green Worm On cabbage and cauliflower. Dust with Hammond's Slug Shot.

Cut Worms Mix 1 lb. Paris Green in 10 lbs. of bran. Add one quart black strap molasses and two lemons chopped fine. Mix the whole to a crumbly mass and scatter in the field.

Grass Hoppers Same as for cut worms.

Mildew on Peas Spray with Fungi Bordo. Follow directions on the package.

Potato Diseases For scab and other fungi on potatoes, dip the tubers in a solution of one pint formaldehyde and 25 gallons of water allowing them to soak two hours. See potato page 42.

Tuber Moth and Blight Moths enter the soil thru cracks. Keep the potatoes well hilled and spray with Tuber Tonic.

Tomato Worms Pick off by hand or before fruit is half grown. Spray with Arsenate of Lead solution three to four level tablespoonfuls to one gallon of water.

Tomato Blight Spray with Fungi Bordo, using according to directions on the package.

Slugs Spray with Kils-All or dust with Hammond's Slug Shot.

Melon Blight Spray the hill freely with Fungi Bordo so that the liquid will follow the stem several inches below the surface. This should be done as a precaution as well as for a remedy.

Nematode Plant the infected land to Barley or Grass for three seasons. Stir the soil deeply and keep free from weeds. Apply Toro Sulphur two sacks per acre or 1 pound per 100 square feet.

Cucumber Beetle Spray with S. W. Dry Arsenate of Lead or dust with Nico Dust.

Onion Thrip Spray with Kils-All. Follow direction on package.

Melon Aphis Dust with Nico Dust. Full information on insecticide page.

Your 1921 book was so full of useful information that I can not get along without another.

Every farmer can learn something of value by carefully following your advice.

H. H. CONNOR, Calif.

CITRUS TREES

The Scales For black, red, yellow, purple, greedy and soft scale spray with Kils-All or Spra-Mulsion 3-4 lb. Dry Lime Sulphur 3-4 lbs., water 10 gallons.

Mealy Bug Use Kils-All according to direction on the package.

Red Spider Dust with Nico Dust. Full information on insecticide page.

Aphis Dust with Nico Dust. Full information on insecticide page.

Gum Disease and Scaly Bark Apply Fungi Bordo to the lower branches, trunk and surface roots at base of tree.

DECIDUOUS TREES

San Jose Scale Also Leaf Blister Mite, Peach Leaf Curl and Red Spider. Spray dormant trees with solution of ten tablespoonfuls of Dry Lime Sulphur to one gallon of water. For summer spraying use 3 tablespoonfuls to one gallon of water.

Pear Blight Cut out every appearance of the disease on twigs, branches or trunk well down into healthy wood. Disinfect the shears after each cut.

Woolly Aphid Also Black Peach Aphis, spray with solution 1 oz. Black Leaf 40, 1½ lbs. Fish Oil Soap to seven gallons of water. Soak the same solution into soil over the roots.

Peach Borer Dig the borer out with a sharp pointed knife and cut the tree back heavily.

Codling Moth After first bloom has fallen and before the calyx cups are closed spray with solution of one pound S. W. Arsenate of Lead to one gallon of water.

Climbing Insects To prevent ants and other insects from entering trees, apply Tree Tanglefoot.

MISCELLANEOUS

Ants Apply Buhach Powder in the hill for large red ants and along the run of the small house ant. Buhach powder is non-poisonous and may be used in the house to eliminate ant troubles.

Mealy Bug This insect may appear in vegetables, shrubs or trees. Use Kils-All.

Snails Spray with Kils-All or dust with Slug Shot.

Flies For flies on cattle or horses spray the animal with Dr. Hess' Fly Chaser.

Chicken Lice Dr. Hess' Instant Louse Killer.

Gophers Use Gopher-Scent. They like it and it does the work.

Ground Squirrels Gas Balls are more effective than any remedy we know of.

Moles Rittenhouse Mole Trap.

THE BUG'S BOARD BILL

Insect pest control is one of the most important problems confronting agriculture today. One-tenth of all farm products, and thirty per cent of all fruit, is destroyed every year in this country by one kind of bug or another.

The board bill of these pests is computed at \$1,100,000,000 a year. As big figures mean little to us in these days after the war, it may be stated by way of concrete illustration, that this sum is about half that required to run the United States government for a year.

The necessity for spending money in combatting these insect pests is resented by every one. It often seems to the grower as though it was like throwing money away. But it is far from it. If insect pest control work were neglected generally for any considerable length of time there would be no money and no food.

So as life is just a battle at best, it seems that one of the principal participations of the farmer is to throw down the barrage against the host of insect invaders.

After reading this can you doubt the necessity for every orchardist, rancher, gardener, and every one having even a small garden, being prepared to destroy insects and disease that rob you of such a large per cent of your crops.

Look over our list of insecticides and sprayers, you will find the things best suited to your purpose.

SWAT THE BUG

Sherwin-Williams Insecticides

Will Insure You Better
Fruits and Vegetables

NO POISON MAY BE SENT BY MAIL!

Sherwin-Williams Insecticides

Will insure you better fruits and vegetables.

Notice Poisonous insecticides cannot be sent by mail. Many insecticides are not dangerously poisonous. Some are in liquid form, put up in tins or glass; to send these by mail, extraordinary care must be given to the packing, which necessarily adds much to the weight and therefore to the postage which may seem out of proportion to the purchase price.

On bulky items where the postpaid price is not mentioned, we prefer to send by express, and shall do so unless requested to do otherwise.

Read This

If wanted by parcel post, add sufficient money to cover postage. Estimate liquids plus package at the rate of 4 pounds to the quart, or 14 pounds to the gallon. See parcel post rate on inside of front cover page.

Prices fluctuate and are subject to market changes.

"To successfully grow fruit and vegetables, it is necessary to be prepared at all times to combat and control the destructive insects and diseases which are classified in three distinctive classes; namely, leaf-eating and chewing insects, leaf-sucking insects and fungus diseases.

Different control measures are used in combating each type of insect and disease as above mentioned.

Complete information from our best authorities on this subject has been secured and may be obtained in book form free. Write for our S. & W. Sprayers Manual.

Owing to the necessity of combating against all kinds of insects and plant diseases we have given more careful instructions than in previous years.

See our insecticides and our sprayers and dusters. You will find them to suit every purpose for the back yard gardener or for the market gardener, orchardist, rancher or stockman. Sprayers to suit every occasion.

Read your Farm Bureau Monthly for timely instructions!

Sherwin Williams Dry Powdered Arsenate of Lead

Because of its unusual lightness, stays thoroughly in suspension during spraying operations, thus giving the spray uniform strength. May be used as a wet spray or dusting. For the control of Codling Moth, Cabbage Worms, and all leaf eating and chewing insects.

Directions: One to one and one-half pounds to fifty gallons of water. Or three or four level tablespoonsfuls to one gallon of water. For dusting use with five or six parts powdered Lime. (1/2 lb. 30c) (1 lb. 70c) (5 lbs. \$1.75.) Cannot be sent by mail.

Sherwin Williams Fungi-Bordo (Bordeaux Mixture)

In powdered form, mixes perfectly with cold water. For peach, tomato and potato blight all fungus diseases.

Directions: Use seven to nine pounds to fifty gallons of water. Or seven to eight tablespoonsfuls to one gallon of water. (1 lb. 35c) (5 lbs. \$1.50) (25 lbs. \$5.00). Write for quantity price. Cannot be sent by mail.

Sherwin Williams Dry Lime-Sulphur The use of Lime-Sulphur solution is known to practically every fruit grower in the country. Sherwin-Williams Dry Lime-Sulphur is standard Lime-Sulphur solution in dry powdered form—the first and only one of its kind in the market. It has all the advantages of the liquid material, but eliminates the disadvantage of heavy freight charges, loss from evaporation and leakage; also the inconvenience of handling a heavy and bulky barrel. Its effectiveness has been proven by a number of years of use by large fruit growers and practically all Experimental Stations.

It will control San Jose Scale, Leaf Blister Mite, Peach Leaf Curl and Red Spider.

Directions for use is spraying dormant trees. Use from ten to fourteen pounds to fifty gallons of water for eight to ten tablespoonsfuls to one gallon of water. For summer spraying against fungus diseases on all stone fruit, use two and one-half to three pounds to fifty gallons of water. (1 lb. 25c) (5 lbs. \$1.00) (10 lb. pkg. \$1.70) f. o. b. Los Angeles. Write for quantity price. May be sent by mail.

Sherwin Williams Paris Green has by years of use proven its quality. It has become the standard Paris Green everywhere. It is light and fluffy, insuring good suspension in the spray tank and thorough covering of the foliage; contains approximately 56% arsenious oxide and less water soluble arsenic than is allowed by law. It is one of the safest and most effective Paris Greens on the market today.

Directions for use: Four to six ounces to fifty gallons of water. Or two teaspoonsfuls to one gallon of water. For cut worms and grasshoppers add one tablespoonful of Paris Green to ten pounds of bran and spread about the base of the plants. It is always well to add 1/4 lb. Paris Green to each barrel of Bordeaux when spraying tomatoes. (1/4 lb. pkgs. 20c) (1/2 lb. 40c) (1 lb. 65c) Write for quantity price. Cannot be sent by mail.

Sherwin Williams Pruning Compound

Will aid nature in healing wounds without retarding the growth. Has special disinfectant qualities. The compound is ready for use. Cover all cuts at once; use stiff brush or cloth to apply. (1 qt. 75c) (1 gal. \$2.25) May be sent by mail.

For Aphides and All Sucking Insects Use

"BLACK LEAF 40"

Nicotine Sulphate—40% Nicotine

1 oz. 35c—makes 6 gals. spray.
1/2 lb. tin—\$1.25—makes 40 to 120 gals. spray.
2 lb. tin—\$3.50—makes 160 to 500 gals. spray.
10 lb. tin—\$13.50—makes 800 to 2,500 gals. spray.

Anchor Brand

For Dry Dusting of Trees, Vines, Etc.

Bleaching Fruit, Etc.



It has been proven and so recommended by the University of California that if you sulphur your grape vines and orchards six times they will not be affected by Mildew or Red Spiders and rust.

Anchor Brand Velvet Flowers of Sulphur, packed in double sacks, is the fluffiest and purest sulphur that money can buy; the best for vineyards; the best for bleaching purposes, leaving no ash.

Try our new brand ventilated Sublimed Sulphur—Impalpable powder, 100% pure, in double sacks, for dry dusting and making paste Sulphur.

(Per 110 lb. sack \$5.40) (5 sack lots \$5.35 per sack) f. o. b. Los Angeles.

Write for quantity prices.



Diamond S Brand

For Lime-Sulphur Solution

For Lime-Sulphur Solution, use our Diamond "S" Brand Refined Flour Sulphur. We can furnish you this sulphur at such a low price that it would pay you to mix your own solution and net you a profit equal to the amount paid out for labor in spraying your orchard, even if you pay your men \$4 per day for making the solution and applying the same.

Send for circulars No. 6, No. 7 and No. 8, for information from prominent growers and horticultural commissioners; and booklet "The Truth About Sublimed Sulphur." (Per 110 lb. sack \$3.80) (5 sacks \$3.75 per sack).

Toro Brand (See Fertilizer).

INSECTICIDES—Continued

Rosin Spray Effective for black, red, yellow, purple and citricola scale, mealy bugs, wooly aphid, black peach aphid and plant lice. Recommended by the Horticultural Commission. Dissolve 1 lb. of the spray in 2½ gallons of either hot or cold water and thoroughly mix before spraying it on trees or plants. (1 lb. can 35c) (2 lbs. 60c) (3½ lb. can 90c) (40 lb. can \$6.00) f. o. b. here.

Tobacco Dust For aphids and small insects in plant beds and poultry houses. (lb. 20c) (10 lbs. \$1.50) Cannot be sent by mail.

Tobacco Stems For fumigating green-houses and chicken nests. (10 lbs. 75c) (by mail 20c per lb.) Write for quantity price.

Tree Tanglefoot (Paste). This is a sticky substance applied to the bark of trees to protect them from all climbing insects and also rabbits. It will prevent ants from entering the trees. One application is good for three or four months. (lb. cans 60c) (3 lb. \$1.50) (5 lb. \$2.75) postpaid.

Whale Oil Soap (Fish Oil). This is not only an excellent insecticide for killing plant lice and fungus growth, but should be mixed with most all liquid sprays as it causes the spray to adhere much better to the leaves. (1 lb. 25c) (5 gal. \$1.00) (40 lbs. \$8.50) May be mailed.

Blue Stone (Sulphate of Copper). Applied in time it will prevent mildew and all fungus diseases. Also prevents smut on barley and wheat, by soaking seed to be planted in a solution of 1 lb. to 6 gallons of water for ten or fifteen minutes. (Per lb. 15c) (25 lbs. \$3.00 f. o. b. here.) May be sent by parcel post.

Carbolic Acid, Crude (1 qt. cans 60c) Cannot be sent by mail.

Carbon Bi-Sulphide (Liquid) For exterminating gophers, squirrels, ants or any vermin that live under the ground. Saturate cotton or other absorbent, put deep in hole and close all openings. For ants, pour into the openings. For weevil in grain, put grain in air-tight chamber; for 100 cubic feet of space use ½ pint Carbon Bi-Sulphide, saturate it into any absorbent so that it will evaporate quickly; close the chamber tightly for three or four hours. It is not necessary to remove the grain from the sacks. Notice: It is very combustible. Do not smoke or have fire near while handling. (Pint 40c) (Quart 60c) (1 gal. \$2.25) Cannot be sent by mail.

Formaldehyde (Liquid). For destroying the germs of smut on grain, scab and rhizoctonia on potatoes. Dilute one pint in forty gallons of water, submerge potatoes one and one-half hours and grain only long enough to moisten it. (½ pint 45c) (1 pint 75c) (1 qt. \$1.50) Cannot be sent by mail.

Hammond's Slug-Shot (Powder). Destroys bugs, insects and worms on melons, lima beans, cucumbers and tender plants. Also for use on asters, roses and flowering plants. Easily distributed by duster or in water by spraying 1 lb. to 10 gallons of water. Not injurious to persons or animals. May be sent by mail. (lb. 40c) (5 lbs. \$1.25) postpaid.

Kils-All Is a new insecticide which has been thoroughly tested for several years and by thorough experiments we have found it to be the best remedy we have ever tried for Mealy Bug, Thrip, White Fly, Wooly Aphid, Red Spider, Soft Shell Scale and Black Aphis. It may be used on the most tender greenhouse plants, according to directions, without burning the foliage. (½ lb. cans 50c) (1 lb. cans 85c) (5 lb. cans \$3.00) (40 lb. cans \$20.00 f. o. b. here) May be sent by mail.

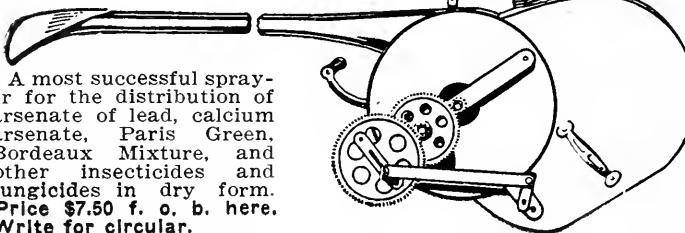
Lime Hydrated by steam. Mixed with water, this makes an excellent preparation for whitewashing and disinfecting of all kinds. (4 lb. cartons, 25c each) (80 lb. sacks \$1.25) May be sent by mail, postage extra.

Sulphur As an insecticide is used for the control of Red Spider and Mildew. Is used extensively on vines and vegetables. The Sulphur we have to offer is the purest that money can buy. We offer three brands, but would recommend Anchor Brand for dusting, Diamond Brand for Bordeaux paste, the Toro Brand for fertilizer and to destroy any germs or Microzoa that may be in the soil:

Anchor Brand—110 lb. sack \$5.40; 5 sacks lots, \$5.35.

Diamond Brand—110 lb. sack, \$3.80; 5 sack lots, \$3.75.

F. O. B. Los Angeles

Springfield Duster

A most successful sprayer for the distribution of arsenate of lead, calcium arsenate, Paris Green, Bordeaux Mixture, and other insecticides and fungicides in dry form. Price \$7.50 f. o. b. here. Write for circular.

NICO DUST INSECTICIDES

The American Vegetable Growers Association during one of their deliberations concerning insecticides have concluded that dusting is more effective, more easily applied and more economical than liquid spraying. That is about the best authority to be had. Nico Dust is the best thing in that line that has yet been prepared and it has proven satisfactory.

These preparations are in the form of a dry powder or dust, which is applied with a blower, thus affording a material saving in time, labor and expense. The discomforts as compared with liquid spraying are practically none.

"**NICO DUSTS**" are carefully prepared and have made possible the control of a large number of insects which have heretofore been difficult to eradicate.

Various pests require various strength of "Nico Dusts" to effect the proper killing, and each mixture is prepared from proven formulae which is the result of several years of research work. We are prepared to supply large quantities on short notice and our stock is always fresh.

CANNOT BE MAILED**Nico Dust No. 5**

Is made especially to exterminate peach aphid, pear aphid, prune, onion, and orange thrip and similar insects. (5 lbs. \$1.50) (25 lbs. \$5.00) (100 lbs. \$16.00 f. o. b. here.)

Nico Dust No. 6

A very strong mixture made especially for cantaloupe aphid. Large quantities of No. 6 are used successfully in the Imperial Valley and other melon growing districts. (5 lbs. \$1.65) (25 lbs. \$5.35) (100 lbs. \$18.75 f. o. b. here.)

Nico Dust No. 10

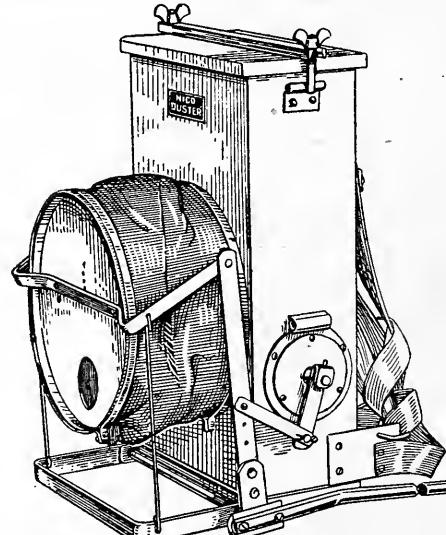
Especially prepared for aphid, garden beetle, cucumber beetle, cabbage worm and other similar insects which are difficult to eradicate. (5 lbs. \$2.00) (25 lbs. \$7.75) (100 lbs. \$27.00 f. o. b. here.)

Nico Garden Dust

Prepared for the home garden where fruit trees, roses, sweet peas and general garden truck are grown. For the control of insects, mildew, leaf cutting insects and other pests commonly found in the garden. (8 oz. carton 40c) (2 lb. pkg. \$1.00) (5 lbs. \$2.00)

Nico Duster

The best duster for heavy work.



The Nico Duster is specially designed for use in large orchards, vineyards and cantaloupe acreage. Hundreds of them are now being used successfully in fruit and vegetable growing sections. Because of its bellows capacity it may be used where no other knapsack duster can reach. It is built on correct principles and has been used under the most severe conditions to effective dust without waste.

The 1922 model includes all the advantages of any other duster together with other improvements which makes it the most satisfactory and economical duster on the market. Price: No. 3 Large size, \$17.00; No. 1, Small size, \$11.50 f. o. b. Los Angeles.

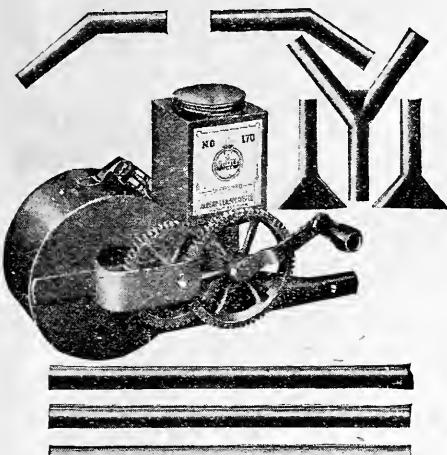
Nico Garden Duster

This is a medium-sized duster for use in the home garden. It is very effective in applying Nico Garden Dust in places that are difficult to reach with any other duster. If you have any dusting at all to do this little gun will please you. (Each \$1.00) f. o. b. Los Angeles.

**Jumbo Powder Blower**

To eradicate fleas, bedbugs, etc., use this blower. Also excellent for dusting house plants. By mail 50c.

Many insects and diseases can be destroyed more conveniently with a powder. For that purpose we have a complete line of dusters to suit your particular convenience.

POWDER DUSTERS—Continued**Utility Duster No. 170**

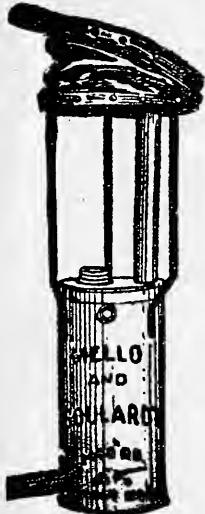
Used for the application, in dry form, or spray chemicals, as Arsenate of Lead, Paris Green, etc. Made of heavy tin enameled red; iron and brass machine cut gears used throughout, and so arranged as to give a steady and uniform delivery. Fan is $3\frac{1}{2}$ by $6\frac{1}{2}$ inches, larger than on other dusters of similar construction. The hopper holds more than a quart. The position of feed valve in bottom of supply hopper is shown by indicator on fan box.

The duster exclusive of the tubes is 14 inches long, 6 inches wide and $9\frac{1}{2}$ inches high; it weighs with complete equipment about 6 pounds. It is provided with three 1-inch by 14 inch tubes, two 45-degreee and one Y, or two-way connection and two large nozzles with wide spread, and an adjustable carrying strap. All points in the pipe line lock securely, no loose joints as on other makes of dusters.

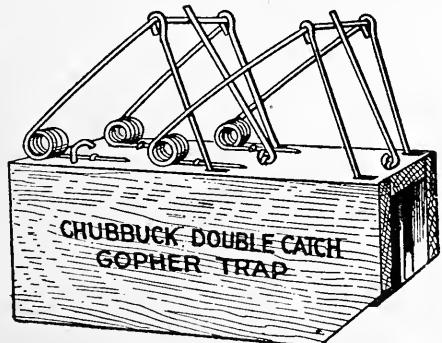
Shipping weight, 8 pounds. Price \$7.50 f. o. b. here.

Gopher and Squirrel Exterminators

All Prices F. O. B. Los Angeles. Poisons Must Go by Express. Add Postage if Traps are to be Sent by Mail.

**Eureka Squirrel Exterminator**

With the use of carbon bi-sulphide, this is the best and cheapest implement with which to eradicate the squirrel pests on your land. We can confidently recommend the use of this machine in vineyards, orchards, grain fields, pasture lands, etc. It is of simple construction, best galvanized sheet steel with bellows attached. The working of the bellows causes the carbon bi-sulphide in the machine to generate a gas, which is forced into the burrows of the squirrels, thus killing them instantly. The exterminator forces no liquid into the runs, only the gas, thereby saving 75% of the carbon bisulphide, over the old way of saturating balls of cloth or cotton. A colony of squirrels can soon destroy \$50.00 worth of vegetation. Price \$14.00 f. o. b. Los Angeles. Weight, crated 12 lbs.

Chubbuck Double Catch Gopher Trap

This is the latest and surest Gopher Trap on the market. Catches either large or small gophers. And very often when the gopher is working the dirt ahead of him the trap is sprung catching him by the outer springs. Price 50c.

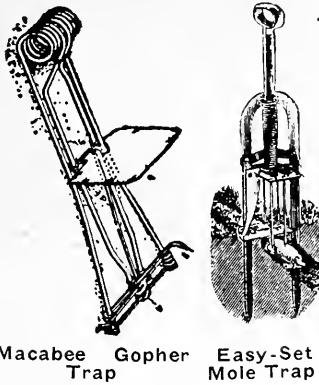
Gopher-Gas Balls

Are used by lighting and rolling into the burrows of the gopher, the same as the Gopher Candle. (Per doz. 60c) (Box of 125, \$3.75.) postpaid. Can be sent by mail.

Squirrel Poison—Moore's (Grain). A certain and specific destruction of gophers, squirrels, crows and mice. (Small size 50c) (Medium size \$1.00) (Gallon-size \$1.90) (5 Gallon drums \$5.50).

"Inclosed please find 30 cents for Macabee Gopher Trap. It is one of the best things I have ever seen."

MRS. C. L. CROW, Florida.



Macabee Gopher Trap
Easy-Set Mole Trap

Macabee Gopher Trap

This is the most convenient gopher trap yet manufactured. It is easy to set, small and can be extended far down into the hole. Price postpaid, 30c.

Box Gopher Trap

This trap is used extensively by gardeners. Is easy to set and sure. Price by mail 40c.

Easy Set Mole Trap

Catches them going and coming. A child can set it with perfect safety. Price \$1.25 f. o. b. here.

Gopher Scent

Gopher Scent is the latest and most improved method of poisoning gophers and squirrels. The scent attracts the gopher and draws him to the bait. We have had some wonderful reports on Gopher Scent and feel that we cannot recommend it too highly.

(Small pkg. 35c)
(medium size 50c)
(large size \$1.00)
(15 lb. pkg. \$6.00) (85 lb. keg \$29.75) f. o. b. here.

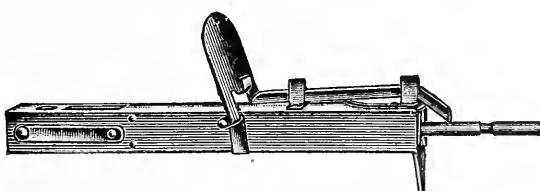
Poisons cannot be mailed.

**Swat the Pest**

The damage done to Horticulture and Agriculture by squirrels and gophers runs into millions of dollars annually and often means ruin to the rancher to say nothing of the disappointment and aggravation to the home gardener. Swat the Pest.

The Never-Fail Gopher Gun and Burglar Alarm

For the Positive Destruction of Gophers, Moles, Squirrels, Rats and Other Burrowing Pests
Price \$1.75 Postpaid

**INSTRUCTIONS**

First—Dig opening in front of hole so that the gun can be inserted in hole in position parallel to surface of ground. Then to load—open gun by tipping barrel (B) pressing on same with thumb through oblong slot and insert 38 BLANK cartridge (C); close barrel.

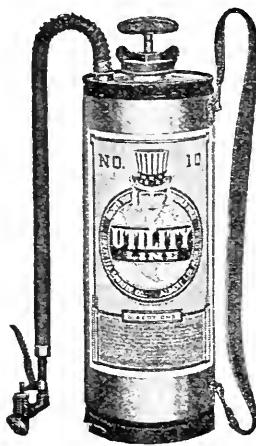
Place gun well in gopher hole, press another plate (A) into ground to steady same, then see that trigger plate (T) is free and pull back firing pin (F) until trigger (X) engages in notch (N). See that outer end (O) of firing pin (F) is free from ground.

For moles—Dig straight down where mole has thrown up mound and you will find hole. Enlarge the same enough to get ample room for gun and place same as for gophers. Mole may not come back the same day, but come he will.

As a burglar alarm it may be used in any way practicable. The best way is to place gun in any convenient place, attach thread to hole in trigger plate and string across room, keeping thread about one foot above floor. Anybody walking across floor and into the thread will set off the gun.

SPRAYERS FOR EVERY PURPOSE

A & M Superior Utility Sprayer



Utility Sprayer

This sprayer is made of heavy galvanized iron or brass, all seams sweated and riveted, tested at 95 lbs.; tank equipped with standard hose connections, capacity 3½ gallons. The pump cylinder is made of heavy brass tubing, with bronze ball check valve contained within a thin brass cage, which does not deteriorate like rubber. The nozzle is made of brass and can be adjusted to be operated at any desired distance by three-eighth inch connecting rod. This sprayer is especially adapted for spraying trees, poultry houses, out-buildings, barns, and vegetables of all kinds. By reason of the ball bearing check valve, any insecticide or acid may be used safely in this pump without danger to the valve. This pump is the dairymen's friend. Packed, one in a box, shipping weight 10 lbs. Price: galvanized, \$8.00; brass \$11.50 f. o. b. Los Angeles.

Utility No. 40 Portable Outfit

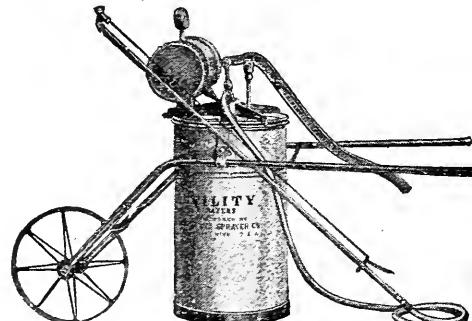
Very useful for painting, whitewashing, and disinfecting warehouses, factories, barns, trees and greenhouses.

TANK larger than most similar outfits, made of heavy galvanized iron. A fine strainer at suction end prevents sediment getting into working parts of pump.

FRAME substantially built of steel, well braced and balanced.

Equipment:—Capacity 18 gallons; 10 feet ½ inch 5-ply spray hose, 4-foot spray rod; 1 patented Utility Angle Nozzle No. 65. Shipping weight complete, crated 85 pounds.

No. 40—Portable Outfit. Price, each \$35.00 f. o. b. Los Angeles.



UTILITY NO. 40A PORTABLE OUTFIT

Same in construction as our No. 40, but equipped with an air pressure tank mounted on pump casting. This makes a one-man outfit. By obtaining 250 pounds pressure considerable spraying can be done without pumping.

Equipment same as with No. 40.

Shipping weight, complete, crated, 100 pounds.

No. 40A—Portable Outfit. Price each, \$45.00 f. o. b. Los Angeles.

Wagon Spray Boom



This boom can be used with any good barrel pump, but gives the best satisfaction in connection with our No. 50A. It is light, strong and adjustable to every position. Will throw spray at any angle and can be folded so that you can drive thru narrow

gates and can be set to spray between rows of grape vines, etc., two nozzles spraying to the right and two to the left. One barrel of liquid will cover three acres. A ten-year-old boy can operate it. The cheapest and best method of spraying a field.

Price \$11.00 f. o. b. Los Angeles.

Utility Barrel

Pumps

Cylinder is made of heavy brass, 2½ inches in diameter. Brass plunger can be adjusted without removing, having special treated cotton wick packing to prevent corrosion by chemicals. All working parts that come in contact with liquids are brass. Bronze ball valves easily removed. Pressure of 150 to 200 pounds can be maintained.

In complete outfit we furnish our patented Utility adjustable nozzle which always gives control of spray at nozzle end. A fine strainer avoids sediments getting into working parts.

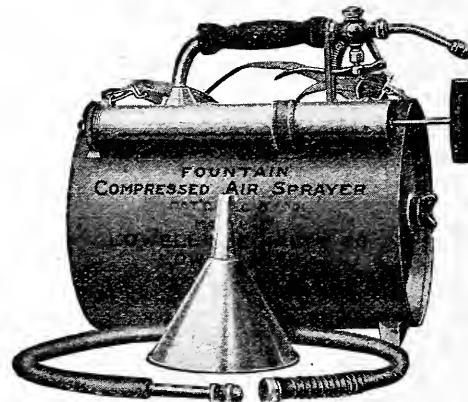
Utility No. 50-A—2½ in. cylinder complete as shown in cut. Without Barrel—Price \$22.50, f. o. b. here. Weight crated 50 lbs.

Utility No. 90A, 1½ in. cylinder without barrel, \$17.00 f. o. b. Los Angeles.

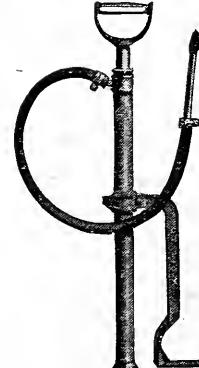


Has stood the test fifteen years. The tank is made of heavy steel or brass, holding three gallons. The discharge pipe extends down through the tank to the bottom of the solution. The pump is located on the outside of the tank and the valve does not come in contact with the insecticides or acid used in spraying. This is the all-purpose sprayer. Price: galvanized \$7.00, brass \$9.50, f. o. b. Los Angeles. Weight 20 lbs.

Lowell Compressed Air Sprayer



Lowell Compressed Air Sprayer



Utility No. 95

Bucket Pump, No. 95

All working parts of this pump that come in contact with spray solutions are brass. By removing variable disc a straight stream can be had for washing windows, automobiles, etc., in addition to general spray purposes.

This is a double action pump, the air chamber being provided by the hollow plunger rod of ½-inch tubing. Body of pump is 1¼ by 19 inches, made of heavy seamless brass tubing. Pump is equipped with 2 feet of ½-inch, 5-ply hose and 12 inches of ¼-inch pipe and our No. 80 angle service nozzle. The brass parts are highly polished and lacquered; the handle and foot rest are painted a rich carmine red. Wt. 6 lbs. Price \$5.50 f. o. b. Los Angeles.

PEA APHIDS CHEAPLY CONTROLLED

Green pea aphids are conquered at reasonable cost for materials and labor by M. E. Costa of the Bay Shore region of Alameda county by use of wet nicotine sulphate spray. With his rig, one man and a helper spray seven acres of peas per day very thoroughly, using 200 gallons of the spray per acre at a cost of 2 cents per gallon for the materials. He first tried it out in his garden with the wet nicotine sulphate on a few rows. Practically none of the insects could be found under those which had been sprayed; but the ground was speckled green with those under the unsprayed vines. So quickly does the material work when it touches the bugs that Mr. Costa has observed dead ones in returning on the same round a few minutes after the spray has been applied.

Mr. Costa found that the Wagon Spray Boom with four Bordeaux nozzles did the work. The rows are 32 inches apart and the wide wheels of the sprayer are just far enough apart so they straddle two rows exactly. The helper is desirable to watch the nozzles. The spray certainly hits the bugs hard. They must be hit hard because only those which are wet with the spray seem to die at once, and the chances are that two sprayings would be necessary in order to catch those which are missed the first time. He uses somewhat less than a half-gallon per 300 gallons of water. Two or three pounds of whale oil soap are dumped into the sprayer along with the nicotine sulphate to help spread the spray.

SPRAYERS—Continued**Perfection Compressed Air Pump**

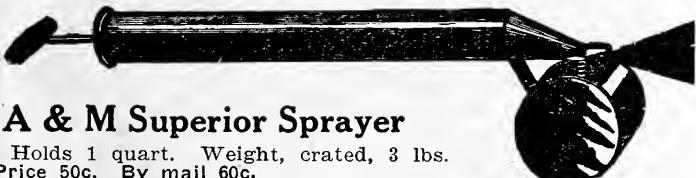
The tanks are made of heavier metal than has ever been used in sprayers of this kind, making the tank practically unbreakable. The pump is 1½-inch seamless brass tubing with a brass valve, and is sealed into the top of the tank with heavy threads following the construction used in the best makes of fire extinguishers.

This sprayer will handle Whitewash, Water Paints, Bordeaux Mixtures, etc., perfectly.

For whitewash and all heavy mixtures it is necessary to use a "W. W." Cap in nozzle, which is furnished with sprayers. These sprayers are made in galvanized steel or brass as ordered. Equipped with 4 feet of hose. Weight, packed, 14 lbs.

Galvanized Steel \$7.50
All Brass \$10.50
3 ft. brass extension rod \$1.00

F. O. B. Los Angeles

**A & M Superior Sprayer**

Holds 1 quart. Weight, crated, 3 lbs.
 Price 50c. By mail 60c.

Little Midget holds 1 pint; is just the sprayer for home use.
 Price 40c. By mail 50c.

JUST A WORD TO THE NEWCOMER**Get the Idea of Community Co-operation**

There are thousands of you. What will you do? Many of you that have not yet reached 50 years will find employment in one of the big industries. But the thousands who have passed the 50 years and who have come with their families to a more congenial climate, will ask, "What can I do to have a small income that I may live in comfort?"

I can give you no better advice than to consult the management of Runnymead No. 3, located on the Ventura Boulevard in San Fernando Valley. Get their ideas about making a living on a small acreage by co-operating with your neighbors that you may buy and sell to better advantage. If you raise poultry or berries your half acre together with many other half acres makes a respectable quantity that can afford a business-like marketing and can be handled more economically.

Get the idea of Community Co-operation.

Do not forget that A & M Seeds and this catalog mean success to you.

If further advice is sought come and see us.

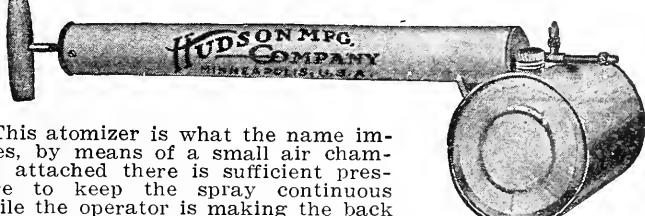
Lime-Sulphur

This spray material is used in the control of some insect pests and fungus diseases. It is most commonly used on deciduous fruit trees in the early spring just when buds are beginning to swell. It is always applied in the form of a liquid spray, prepared by diluting the lime-sulphur with water.

The two forms in which lime-sulphur is handled by manufacturers and dealers are (1) concentrated lime-sulphur solution and (2) dry lime-sulphur.

Directions appear on every package; be sure to read them.

Lime-sulphur is used in the control of the following pests and diseases: Shot-hole fungus, brown rot, peach blight, citrus thrips, peach leaf curl, peach twig borer, pear leaf blister mite and San Jose scale.

Continuous Sprayer

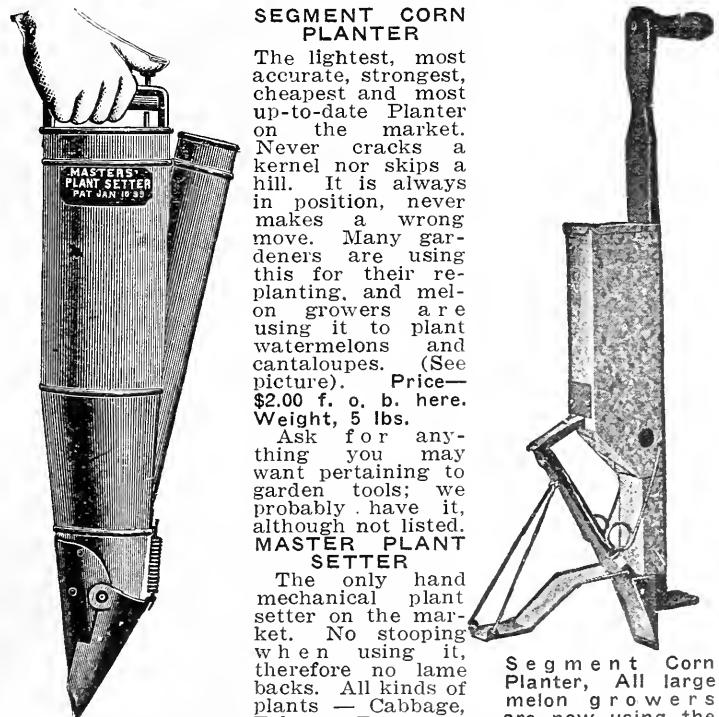
This atomizer is what the name implies, by means of a small air chamber attached there is sufficient pressure to keep the spray continuous while the operator is making the back stroke of the arm, during which time other atomizers are at rest. With galvanized tank, each \$1.00. With brass tank, each \$1.25. If wanted by mail add 10c for postage.

Seeders and Planters

Cyclone Seed Sower

Cyclone Seed Sower

This Seeder is equipped with the following important features: Sloping feed board, automatic feed adjustment, distributing wheel, triple gears. Weight, 5 lbs. Price \$3.00.



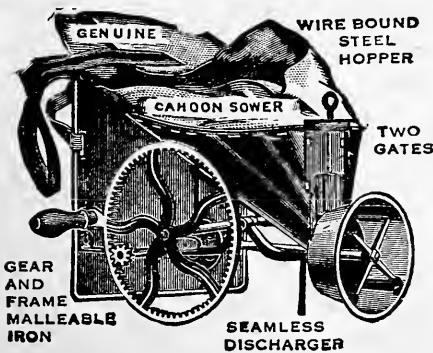
Master's Plant Setter
 GENUINE
 CAHOON SOWER
 WIRE BOUND
 STEEL HOPPER
 TWO GATES
 GEAR AND
 FRAME
 MALLEABLE
 IRON
 SEAMLESS
 DISCHARGER

THe Standard Sower acknowledged to be superior to all other hand sowers. Gives perfect satisfaction, and can be used for sowing alfalfa and grains broadcast. Sows from four to eight acres per hour at a common walking gait. A saving of four-fifths of the labor and one-third of the seed by its use. A person entirely unaccustomed to sowing by hand can use this machine with perfect success. Price \$6.00 f. o. b. here. Weight crated 8 lbs. Can be sent by mail.

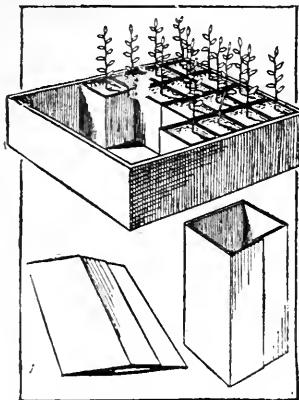
The only hand mechanical plant setter on the market. No stooping when using it, therefore no lame backs. All kinds of plants — Cabbage, Tobacco, Tomatoes, Cauliflower, Strawberries, Sweet Potatoes, etc., are set in water and covered at one operation. Weight 10 lbs.

Price—Each \$6.00 f. o. b. here. Ask for circular.

If there is a new comer in your neighborhood kindly send us his name that we may mail him this catalog.

Hand Seeder and Planter

Segment Corn Planter, All large melon growers are now using the Segment Corn Planter.



protects the tender plant from cut worms, wire worms, moles and field mice.

The Expan Planting Pot

Made of heavy tar paper. Open top and bottom. For propagating plants, trees and shrubs — no waste space — no breakage. For the nurseryman, florist and market gardener. You can grow melons, squash, canteloupes, cucumbers, etc., three weeks earlier in these pots than out in the open. When setting the plants in the field plant the pot and all, leaving about one inch above the top of the soil; this

THE EXPAN PLANTING POT All prices f.o.b. Los Angeles

Size	Price per 1000	Price per 100	Wt. per 1000
3x8	\$11.00	\$1.75	85 lbs.
3x6	8.90	1.55	66 lbs.
3x5	7.25	1.50	55 lbs.
3x4	6.25	1.35	44 lbs.
3x3	4.75	1.25	33 lbs.
2x8	8.00	1.45	58 lbs.
2x6	6.25	1.35	44 lbs.
2x5	5.25	1.25	37 lbs.
2x4	4.60	1.00	29 lbs.
2x3	3.75	.75	22 lbs.
1½x5	4.60	1.00	28 lbs.
1½x4	3.75	.75	22 lbs.
1½x3	2.95	.50	17 lbs.

Raffia

We have natural Raffia by the pound or by the ton. Great quantities of it is used on the Los Angeles market by gardeners for tying vegetables. We are headquarters. Price—(Per lb. 25c) For larger quantities write for price.

Spagnum Moss

Fine grade of Eastern moss for packing trees, plants, Asparagus roots, etc. (Single pound 20c) postpaid. (Per bale, \$2.75 f.o.b. Los Angeles.

Green Moss

Line your wire hanging baskets with this green moss. It will add to the attractiveness of the basket. Price—(per lb. 30c).

NURSERY AND FARM REQUISITES

Nursery Supplies

Grafting Wax—(1/4 lb. 25c) (1/2 lb. 40c) (lb. 75c) postpaid.
Balling Twine—(5-lb. ball \$1.75) f.o.b. here.
Budding Twine—(Per ball 50c) (Postpaid 60c).
Budding Cloth—(Per square yard 70c) prepaid.

POT LABELS

Plain	100	1000	Painted	100	1000
4	25c	\$2.50	4	.30c	\$3.10
5	30c	3.10	5	.35c	3.60
6	35c	3.60	6	.40c	4.10

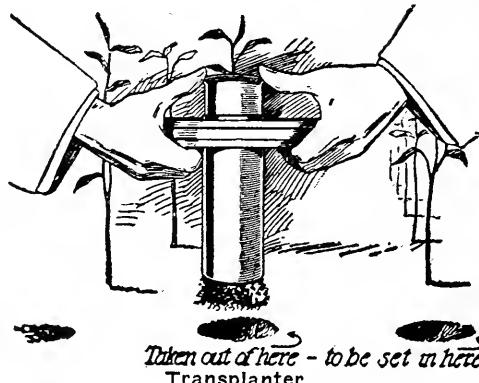
Postpaid

Tree Labels

Copper Wired, painted, 3½ inch	100	1000
	\$.35	\$3.25
Copper Wired, plain	.30	2.75
Ironed Wired, painted	.30	2.85
Ironed Wired, plain	.30	2.50

TRANSPLANTER

A Transplanter that does the work without disturbing the roots. It first makes the hole where you wish the plant, then picks up the plant root and all, without disturbing it, and sets the plant into its new location without checking its growth. A child can operate it. Just the thing for Eucalyptus growers and nurserymen. (50c) (by mail 60c).

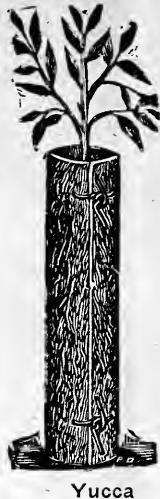


Yucca Tree Protectors

The Yucca Tree Protector is made from the soft spongy Desert Palm, and will last years exposed to the weather. Wires go entirely around the protector, thus holding it in place, even should it crack a little while in use. Protect your trees against the hot rays of the sun, rabbits, gophers, and be sure to use this protector if bothered with Tree Borer.

Size	Lbs.	Per 100	Per 1000
14 in.	.90	\$1.75	\$12.00
30 in.	2.00	2.50	21.00
18 in.	1.25	2.00	15.00
24 in.	1.50	2.25	18.00

Paraffine



Yucca

Parafine Paper Tree Protectors

These Protectors are perforated, giving a free circulation of air around the tree trunk. The Parafine preserves the paper, making the Protector very durable. Will not split or tear.

Size.	—	Lbs.	Price	Price
14 in.	.....	50	\$12.50	\$1.75
18 in.	.....	65	15.00	2.00
24 in.	.....	85	18.50	2.25
30 in.	.....	106	22.00	2.50
36 in.	.....	127	28.50	3.50

Pensylvania Fruit Picker



No ranch is completely equipped without this valuable tool. It is always the choicest fruit that cannot be reached from the ladder; you do not wish to knock it down with a club, as the fall would bruise it. Use the Fruit Picker and the fruit is caught in the pocket prepared for it. Every ranch that has half a dozen or more fruit or walnut trees should have one or more Penssylvania Fruit Pickers. (Price 75c) (by Mail 85c).

Every thing that is offered in this book has been tried and is practical. If you need anything listed here do not hesitate to order it.

Pensylvania Fruit Picker

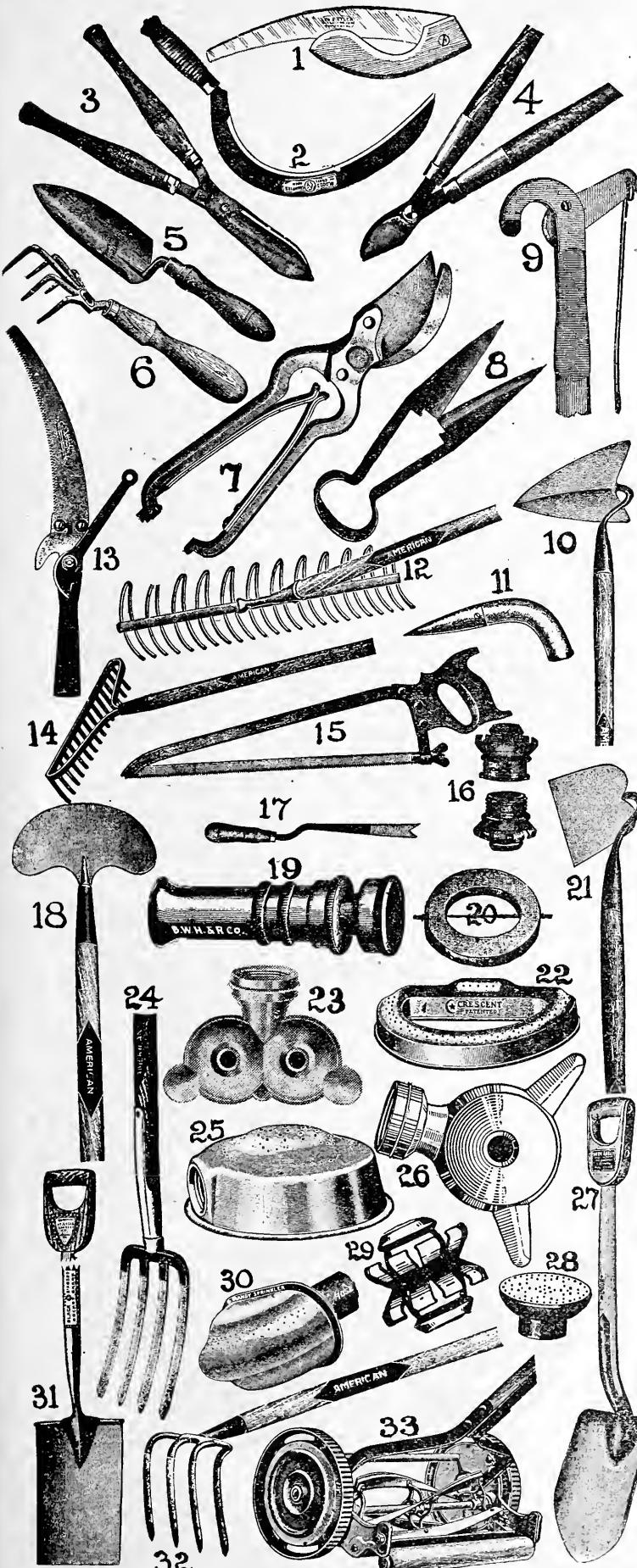
Thompson's Tree Support

Place the supports above projecting branches on the limb to secure them against slipping down. These supports are out of the way of everything. They are perpetual. There is no further expense after putting on. The proposition is simply to make opposite limbs support each other, or the center limbs to support the outer limbs, thus doing away entirely with the ordinary wooden prop. (Per 100, \$2.50) (1,000, \$22.50). Weight 10 to a pound.



Lawn and Garden Requisites

On this page we can only hint at some of the lines we carry, trusting you will, if interested, write and require for more information. We carry a full line of Lawn Mowers, Garden Hose, Pruning Knives, etc.



AMCO GARDEN HOSE

All hose looks alike to the average person, and the buyer is usually at the mercy of the seller. In buying hose from us you are dealing with an established firm, and we go further than that by putting our name on the hose we sell, which signifies that we are not afraid of the quality. Amco hose is made expressly for us. Quality and price are right.

$\frac{1}{2}$ inch, 25 foot lengths with $\frac{3}{4}$ inch couplings.....	\$3.50
$\frac{1}{2}$ inch, 50 foot lengths with $\frac{3}{4}$ inch couplings.....	6.75
$\frac{3}{4}$ inch, 25 foot lengths with $\frac{3}{4}$ inch couplings.....	4.25
$\frac{3}{4}$ inch, 50 foot lengths with $\frac{3}{4}$ inch couplings.....	8.25

SPRAY HOSE

Heavy, high pressure hose for power pumps:	
$\frac{3}{8}$ inch .....	.25c per foot
$\frac{1}{2}$ inch .....	.30c per foot
Five-ply hose for use on small spray pumps:	
$\frac{3}{8}$ inch .....	.17c per foot
$\frac{1}{2}$ inch .....	.21c per foot

LAWN MOWERS

Our lawn mowers are full ball-bearing machines of high quality. We buy them in large numbers direct from the factory and give you the benefit of the saving we make. Compare these prices with the prices of similar mowers, and we are sure you will send us your order.

Ball-bearing, 8-inch wheel:
14-inch cut each \$13.00
16-inch cut each 14.00

Capitol Lawn Edger A most convenient tool for trimming the edge of the lawn and around the walks. Does away with the old back-breaking job. Each \$11.00

GARDEN TOOLS

- No. 1—Pruning Saw, folding handle, \$1.75.
- No. 2—Grass Hooks, 75c and \$1.00.
- No. 3—Hedge Shears, \$2.50 to \$3.00.
- No. 4—Tree Pruner, \$2.75.
- No. 5—Garden Trowel, 25c to \$1.00.
- No. 6—Excelsior Weeder, 25c.
- No. 7—Pruning Shears, \$1.75 to \$3.75.
- No. 8—Grass Shears, 50c to \$1.00.
- No. 9—Water's Tree Pruners, 4 to 10 ft., \$2.00 to \$2.50.
- No. 10—Warren Hoe, \$1.35.
- No. 11—Dibble, 75c.
- No. 12—Lawn Rakes—wire, 24-tooth, \$1.00; 42-tooth, \$1.75.
- No. 14—Garden Rake, curved teeth, 14-tooth, \$1.25.
- No. 15—Pruning Saw, \$2.50.
- No. 16—Perfect Clinching Hose Couplings, 45c pair.
- No. 17—Asparagus Knife, \$1.00.
- No. 18—Turf Edger, \$1.35.
- No. 19—Boston Nozzle, 85c.
- No. 20—Secure Hose Washers, 20c doz.
- No. 21—Garden Hoe, 7-in., \$1.25.
- No. 22—Crescent Fountain Sprinkler, \$1.25.
- No. 23—Twin Sprinkler, 35c.
- No. 24—Spading Fork, long, \$1.75; D-Handle, \$1.90.
- No. 25—Square Fountain Sprinkler, \$1.00.
- No. 26—Wilgus Sprayer No. 2, 50c.
- No. 27—Shovel—D-Handle, long handle, \$2.35.
- No. 28—Rose Nozzle, 75c.
- No. 29—Perfect Clinching Hose Menders, 20c each.
- No. 30—Handy Sprinkler, 50c.
- No. 31—Spade—D-Handle, long handle, \$2.35.
- No. 32—Potato Hooks, \$1.25.

"Norcross" Cultivators—Hoes and Weeders

The Modern Tools—For Garden and Flowers



Like the human hand, these tools cultivate closer to plants without injuring them, than any other implement known, leaving the soil level, loose and untrampled.

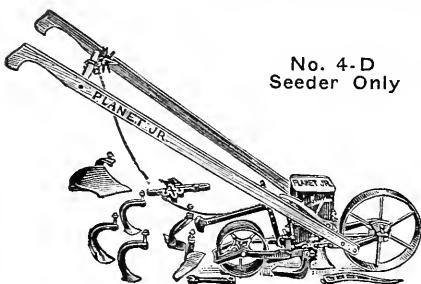
Cost but a trifle more than the common hoe—accomplish much more and better work with decidedly less labor. The sharp, tapering shovels enter the soil freely, literally tearing up every inch of it, from 1 to 6 inches deep, as required.

PRICES EACH—5-prong (wt. 3 lbs.), \$1.50; 3-prong (wt. 2 lbs.), \$1.10; Midget (wt. 12 oz.), 65c. Postage extra. See postal rates on inside front cover page.

PLANET, JR. GARDEN TOOLS

Planet Jr. Tools Will Make Gardening a Pleasure, Besides Saving Time and the Back.

No. 4 Planet Jr.

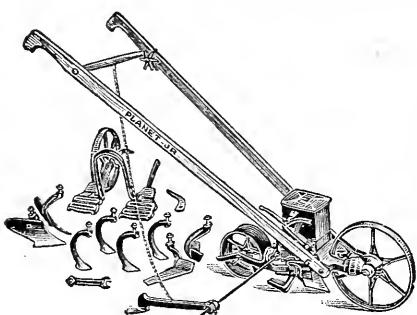


No. 4-D
Seeder Only

Combined hill and drill seeder, single wheel hoe, cultivator and plow. This is the ideal machine for the family garden. May be changed from seeder to cultivator in a few minutes. Your boys and girls will enjoy gardening with this tool. Price \$22.25 f. o. b. Los Angeles.

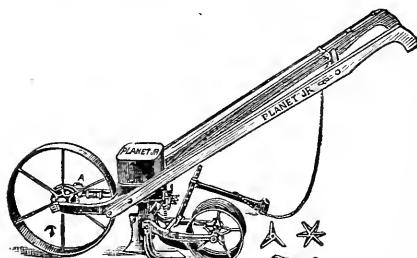
No. 4-D Price \$17.50.

No. 25 Planet Jr.



Combined hill and drill seeder, double or single wheel hoe, cultivator and plow. This is a larger tool and is used by onion growers, lettuce growers and market gardeners. Also a good size for the large family garden. Price each \$26.75 f. o. b. Los Angeles.

No. 3 Planet Jr. Hill and Drill Seeder



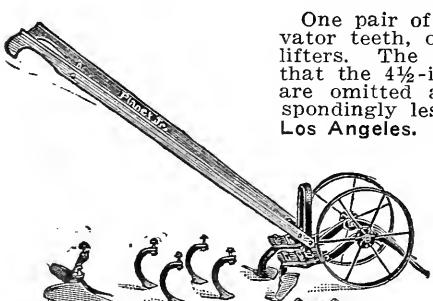
The most useful and accurate seed drill for the market gardener. Growers whose plantings are so large that they require separate seed drills and separate wheel hoes will find that this machine will save enough seed in one year to pay for it. Drops in hills, 4, 6, 8, 12 and 24 inches apart; sows in drills in narrow straight line, at proper

depth, covers, rolls, and marks out the next row in one operation. Price \$21.50 f. o. b. Los Angeles.

No. 11 Double and Single Wheel Hoe

One pair 6-inch hoes, one pair 4½-inch hoes, four cultivator teeth, one pair plows, two 3-tooth rakes, two 5-tooth rakes, two leaf-lifters. The steel frame can be set at different heights to suit. This is one of the most complete implements we have. Each \$17.25 f. o. b. Los Angeles.

No. 12 Double and Single Wheel Hoe



One pair of 6-inch hoes, four cultivator teeth, one pair plows, two leaf lifters. The same as No. 11 except that the 4½-inch hoes and the rakes are omitted and the price is correspondingly less. Each \$13.50 f. o. b. Los Angeles.

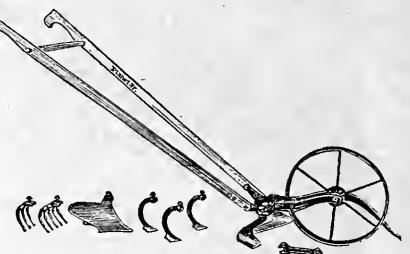
No. 13 Double and Single Wheel Hoe

The No. 13 is the same as the No. 12, except it has only one pair of 6-inch hoes—the most useful of the cultivating attachments, and all that many growers need. Rakes, plows, cultivator teeth, and 4½, 7½ and 9 inch hoes can be added at any time. Each \$9.75 f. o. b. Los Angeles.

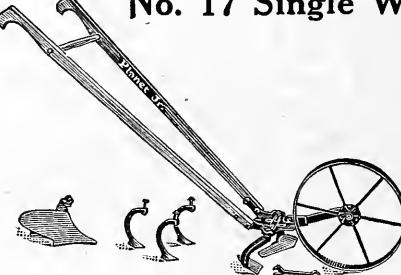
No. 16 Single Wheel Hoe

Equipment: 1 pair 6-inch hoes, 3 cultivator teeth, 1 large garden plow, 1 7-inch rake, 1 4-inch rake, 1 leaf guard.

The most complete single wheel hoe on the market today. Single wheel hoes are lighter than the double and do almost the same variety of work. Used mostly between the rows, yet by mounting the wheel on the other side of the arm, Planet Jr. Single Wheel Hoes can be used to hoe both sides at once while the plants are small—the most important time. The great variety of cultivating attachments enables one to do any kind of garden cultivation, plowing, hillng, etc. Each \$11.00 f. o. b. Los Angeles.



No. 17 Single Wheel Hoe



One pair of 6-inch hoes, three steel cultivator teeth, one large garden plow. Same as No. 16 except in equipment. Each \$9.35.

Planet Jr. tools are made to suit every purpose for the convenience of the gardener.

No. 19 Garden Plow and Cultivator

A very useful implement, especially designed for the farmers' garden work. It offers to everyone with either field or garden crops, a cheap and effective tool for wheel hoe operations. The variety, design and quality of these tools makes the implement light running and effective. It is strong, well made, quickly adjusted, and the height of handles can be changed to suit man, or woman, boy or girl. Each \$7.35 f. o. b. Los Angeles.



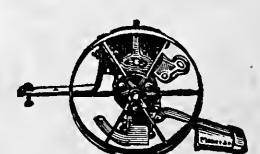
No. 119 Planet Jr.



A very popular high wheel cultivator, fully equipped as shown in picture. This is a durable all-purpose tool. The No. 35 seeder attachment may be used with tool, and makes an inexpensive combination. Price \$5.90 each f. o. b. Los Angeles.

No. 35 Seeder Attachment

The result of an insistent demand for a small seeder attachment for use with wheel hoes. May be attached to any Planet Jr. wheel hoe or garden plow and cultivator, with the exception of the Fire Fly Plow. Suitable for small family gardens. Sows a five-cent packet of seed as economically as a full hopper. Quick-
ly attached.



INCUBATORS and POULTRY SUPPLIES

JUBILEE INCUBATOR

All Prices F. O. B. Los Angeles



Jubilee Incubator

After years of experience in the manufacture of incubators the Jubilee has now reached a stage when it has become a necessity to the poultryman.

The Jubilee is manufactured from the best class dry California Redwood that is durable and built by efficient workmen, with up to date machinery.

Some of the main features are: egg chambers lined with heavy wool felt covered with non absorbent paper which prevents absorption by the carbonic gases given off by the growing chicks. The regulator is the most simple, sensitive and durable of any regulator in existence. Ventilation is perfect and correct in practice. Moisture is taken care of by a special moisture pan which derives its heat from the boiler.

Ask for Special Leaflet

LET OUR SALESMEN SHOW YOU THIS WONDERFUL MACHINE. MADE IN THE FOLLOWING SIZES:

Capacity	Weight	Dimensions	Price
108 Egg	110 lbs.	2'8"x3'	\$37.00
216 Egg	150 lbs.	2'8"x4'3"	48.00
324 Egg	200 lbs.	2'8"x5'3"	60.00
504 Egg	260 lbs.	3'2"x7'2"	78.00

Hot Air Brooder for Small Flocks

Ask the salesman to show this brooder and to explain how to use it.

For back yard poultry keepers there is nothing better than this little heater. All you need to complete the brooder is an empty wooden box from the grocer. If you are only raising a few chickens be sure and see this handy arrangement.

PRICES

Heater only \$2.75
Heater complete with lamp and chimney—Weight..... lbs.... 4.80
A Grand Price \$10.00

Our Little Baby Grand Incubator

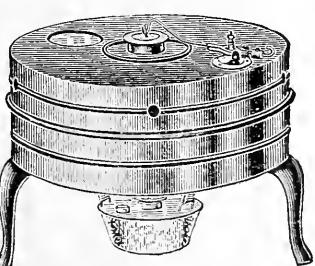
50 EGG CAPACITY, ALL METAL

For the back yard poultry raiser wanting to make the most money out of a few chickens, this small incubator renders a wonderful service and gives the greatest satisfaction. Every foot of ground in our cities and villages available for cultivation or poultry purposes should be utilized not only for the profit there is in it, but for the satisfaction of producing something.

Shipped by Express or Parcel Post. Weight in Carton 20 lbs.

Price \$10.00 f. o. b. here.

Just the thing for the small fancier. Simple in construction, easy to operate, self regulating and shipped in cartons. We make the same guarantee on this little incubator as we do our larger styles.



The Hen in the City

A space 10 feet wide across the back yard or by the garage is large enough to keep a small flock of hens sufficient to supply all the eggs you will need and an occasional pot pie, and do away with the odious garbage can that is more unpleasant and more bother than a flock of hens.

HOW TO CARE FOR A FEW HENS

A small open house protected from the wind and dusted occasionally with slack lime or Nico-dust. Keep tacked to a post a hopper containing a mixture of shell, grit and charcoal. Another hopper for grain, another for dry mash. The hoppers avoid waste. Feed the hens all the refuse from the kitchen and all the green refuse from the lawn and garden.

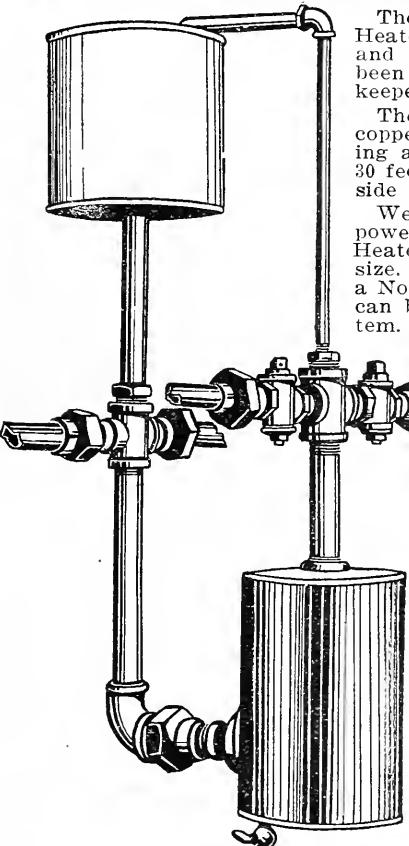
See that they have a clean place for dusting and an unfailing fresh water supply. (See the Water Boy listed in this department.) A little such preparatory care will make subsequent labor and expense insignificant.

If you have a small or a large flock it will be more profitable to have the best. For the back yard hen we recommend the Rhode Island Red because it is a persistent layer and a large sized fowl for table use.

EGGS FOR SETTING

We offer in season eggs for hatching from the purest and largest strain of selected Rhode Island Reds. \$5.00 per setting. From pen No. 2—\$3.00 per setting. Utility pen—\$1.50 per setting. Postage extra. Each setting weighs about two pounds.

THE LOS ANGELES BROODER HEATER



The Los Angeles Incubator Heater is the greatest labor and chick saver which has been brought before poultry keepers.

The heater is heavy, rolled copper and has 16½ inch tubing and is capable of heating 30 feet of brooder box on each side of the heater.

We furnish a Hawks high power gas burner with each Heater and two with the larger size. If you do not have gas a No. 1 Reliable coal oil heater can be used to heat this system.

The heater is equipped for ¾ inch pipe but we do not supply the pipe.

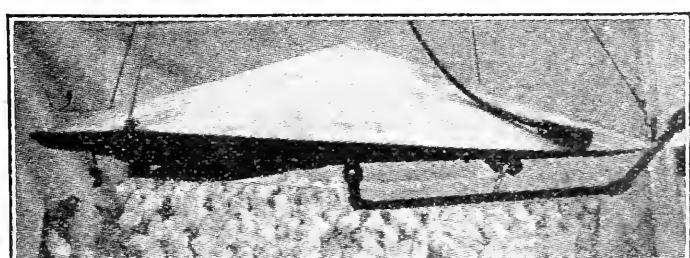
WE ARE ALWAYS GLAD TO ANSWER QUESTIONS

Prices

ROUND—Capable of heating 30 ft. pipe on each side, including a gas burner.....\$23.00

OBLONG—Capable of heating 50 ft. pipe on each side, including 2 gas burners.....\$29.00

PAYNES GAS BROODER



Here is a perfect gas brooder that is strong, durable and easy to operate. It is complete with burner and ropes and pulleys for raising for cleaning purposes. Absolutely no fumes, smoke or odors.

You must see this Brooder to be convinced of its simplicity. Made in two sizes—

28 in. Hover—250 chicks \$10.00
34 in. Hover—500 chicks 12.00

THE NEW IMPROVED RELIABLE BROODER

Raise Your Chicks the
Scientific Way

Standard Blue Flame, Wickless,
Oil Heated Colony Brooder

Price
No. 1. 500 Chick
Size.
\$21.00 f. o. b. Los
Angeles
Weight 38 Lbs.
Packed

Price
No. 2. 1000 Chick
Size.
\$25.00 f. o. b. Los
Angeles
Weight 45 Lbs.
Packed



IMPROVED RELIABLE BROODER

We buy Reliable Brooders by the carload. They are in use by the thousands throughout the big poultry sections of California, and every user is a booster for the Reliable. The heater is positively "fool proof." Has no valves to clog up and cause trouble. The burner is operated on oil level and is adjusted to the maximum flame at the factory so that it is impossible to overflow it. The flame can be adjusted to any height desired by a simple lever device which is easy to understand and operate. All heaters are shipped out fully assembled and tested for leaks. All that is necessary is to fill the oil reservoir and touch a match to the lighting ring and you are ready for action. The cost of operating the Reliable is very low and you can fill the brooder to capacity or you can brood as few as you like, with equal success.

The Reliable is automatically ventilated without any trouble to the operator, and the chicks which are placed in its care are assured of steady, healthy growth.

It is endorsed by many agricultural experiment stations, including the College of Agriculture at Berkeley, and hundreds of our own customers. If you are in doubt at all about the Reliable being the best brooder for you to buy, write to us, and let us explain more fully the merits of this wonderful brooder which is the result of forty-one years experience in artificial hatching and brooding by the manufacturer.

No.	Capacity	Shipping Weight	Price
1	500 Chicks	38 lbs.	\$21.00
2	1,000 Chicks	45 lbs.	25.00

Note improvements:

Indicator dial in front under oil fount—quick, easy adjustment to any size flame desired.

Flexible tube connecting burner to feed pipe, with positive connections—no sleeve connection or packing box or nuts to leak and give trouble.

This 1924 model blue flame, wickless oil heater colony hover will save you time, money and worry. At last we can offer to the chicken raisers a perfect heater that has an absolute flame control and is easy to regulate. It is valueless and works on a positive oil level so cannot clog and go out during the night hours and so chill your chicks. The burner is connected to the feed pipe by means of a flexible tube with positive connections at each end, this making it leak proof and safe. It is equipped with an indicator dial so the flame can be easily and quickly turned to any desired size. The lifting device is positive in acting and there is no danger of it being changed by the chicks. The brooder is supplied with a one gallon glass oil container and the supply will last from 24 to 36 hours.

You can operate this brooder to full capacity or just as low as desired with equal success. It burns with a clear blue flame minus fumes or odor. A great advantage with the heater is that there is no packing or stuffing box arrangement to get loose or lead. Only the best grade long fiber asbestos is used in the lighting rings which are reinforced with a perforated metal ring. They burn less oil than a metal vaporizer.

LET US SEND YOU FURTHER PARTICULARS!

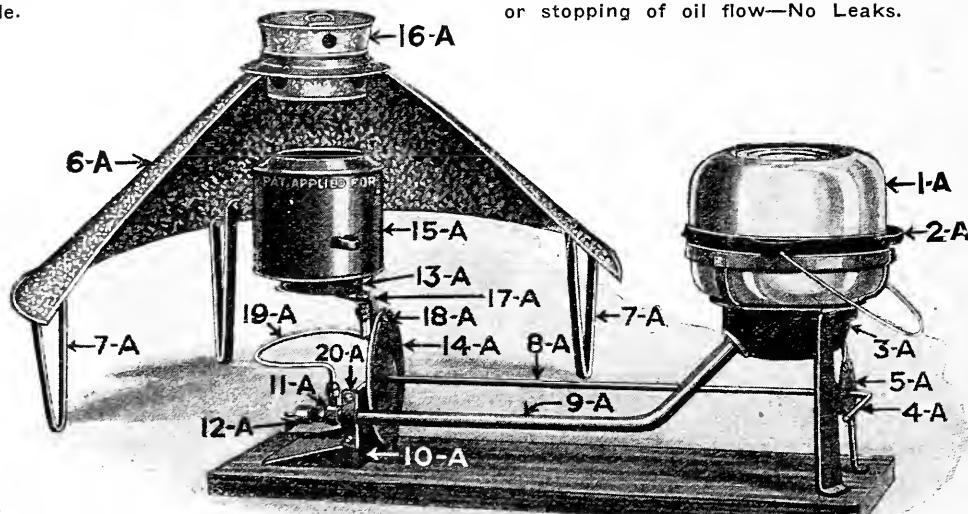
SOME OF THE PRINCIPAL FEATURES

Burns Coal Oil or Kerosene	No Flue—Portable
Absolute Flame Control	Steady Blue Flame
Quick, Easy Adjustment	No Wicks to Trim
Simple in Construction	No Oil Fumes, Smoke or Gas
No Valves or Packing Nuts	Comfortable, Easy to Operate
Works on an Oil Level	No Overflowing of Burner
Economy of Operation	Convenient and Safe

Indicator dial for adjusting flame—No cold corners—No clogging or stopping of oil flow—No Leaks.

Size
No. 1—42 inches.
Weight 38 Pounds
Packed

Size
No. 2—52 inches.
Weight 45 Pounds
Packed



Cutaway Showing the Different Parts

No. 1-A—Glass Oil Reservoir	No. 6-A—Galvanized Canopy	No. 11-A—Connection to Feed Pipe	No. 16-A—Ventilator.
No. 2-A—Metal Lift with Bale	No. 7-A—Legs Supporting Canopy	No. 12-A—Cap for Cleaning Feed Pipe	No. 17-A—Burner Support
No. 3-A—Oil Fount	No. 8-A—Adjusting Rod	No. 13-A—Burner	No. 18-A—Roller Bearing with Washer and Key
No. 4-A—Handle on Adjusting Rod	No. 9-A—Oil Feed Pipe	No. 14-A—Lifting Device.	No. 19-A—Flexible Tube Connecting Burner to Feed Pipe
No. 5-A—Indicator on Stand supporting Oil Fount and Adjusting Rod	No. 10-A—Floor casting Supporting Burner and Lifting Device	No. 15-A—Generator and Chimney	No. 20-A—Strap to Hold Feed Pipe

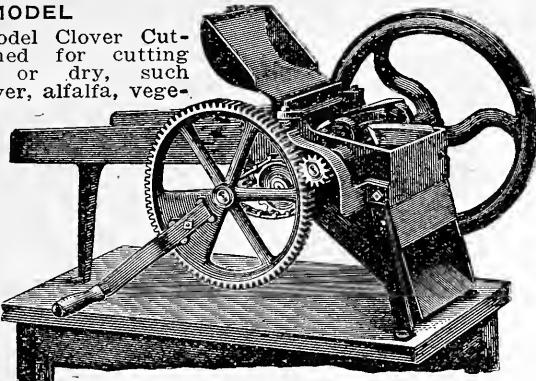
CLOVER CUTTERS

NEW MODEL

The new Model Clover Cutter is designed for cutting either green or dry, such growths as clover, alfalfa, vegetable tops, etc. into eighth-inch lengths.

Made only in one size. Knives can be adjusted and easily sharpened.

Price \$19.00.
f. o. b. here.



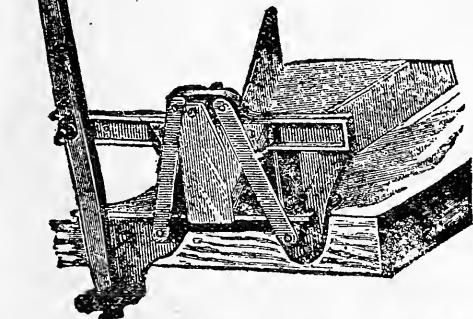
Stiles New Model

PERFECTION GREEN FEED CUTTER

Operates on the same principle of an alfalfa mowing machine. The same knife is used and operated, back and forth in grooves, by the hand. It requires very little exertion and does the work neatly and quickly. The grass is cut any desired length by adjusting the regulator.

We recommend it to the owners of small flocks, and for use in back yards of half a dozen or more hens.

May be sent by parcel post. Wt. 7 lbs. Price \$5.75 f. o. b. Los Angeles.



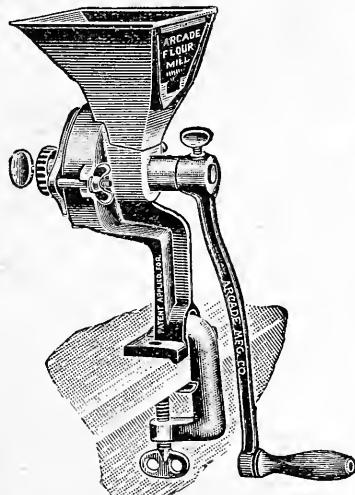
THE ARCADE GRINDING MILLS

The Arcade Flour Mill is called the "Home Mill." It is adapted for grinding whole grains into flour. There is not another machine on the market that compares with this mill for the housewife. It is made of best hardened steel, beautiful finish and needs no repairs except the burrs, which may be replaced at a very low price.

No. 1 Arcade Mill—weight 10 lbs., Price \$4.50.

No. 2 Arcade Mill—weight ____ lbs., Price \$9.50.

Extra burrs for Nos. 1 or 2, \$1.50 set. f. o. b. here.

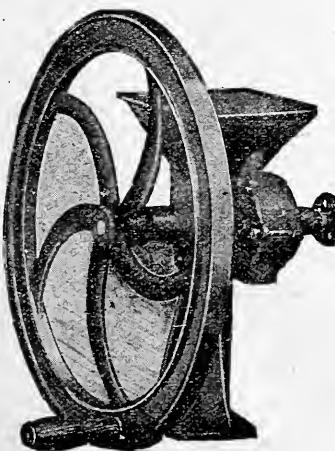


Arcade Flour Mill

Stover

This machine grinds oats, peas, dry bone, shells, etc., for feeding to poultry.

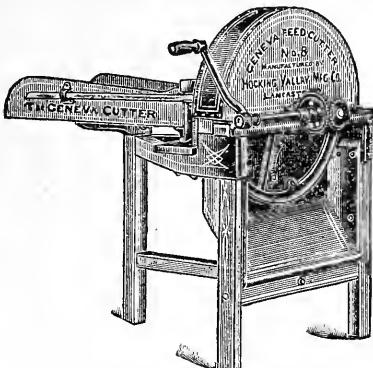
No. 33—18-inch fly wheel. Weight 45 lbs.
Price \$7.50 f. o. b. here.



Stover No. 32

GENEVA CLOVER CUTTERS

This is the most satisfactory machine for the large poultry raiser. The knives are on a balance wheel and the machine will cut from $\frac{1}{4}$ to $\frac{1}{2}$ inches. May be used as a hand or power machine.



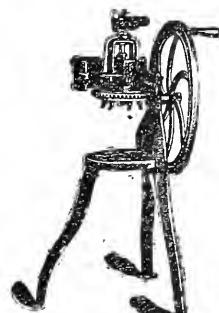
We carry three sizes:
No. 6—weight 200 lbs.
Price \$48.00.
No. 8—weight 240 lbs.
Price \$52.00.
No. 10—weight 280 lbs.
Price \$70.00.
Pulley for No. 6 or 8, \$3.00.
Knives for No. 6, \$2.00 each.
Knives for No. 8 or No. 10, \$2.20 each.
F. O. B. Los Angeles.

BONE CUTTERS

MANN'S NO. 7

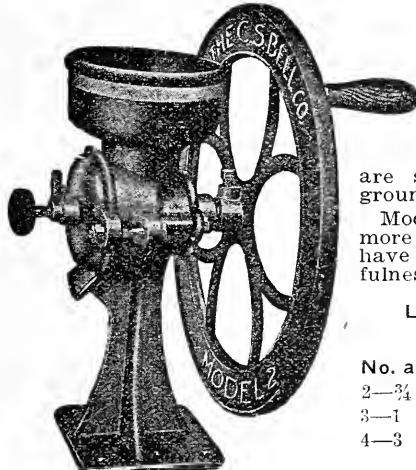
The New No. 7 is mounted on a strong iron stand and has patent automatic governing spring feed. Large, open-hinged cylinder, giving instant access to all working parts; has six knives, gear guard, anti-clog device, heavy balance wheel and other improvements. (See cut).

Price List of Mann's Bone Cutters f. o. b. here.
No. 7 (B. W. and iron stand)
Price \$23.00, wt. 107.
No. 7½ (hand or power)
Price \$30.00, wt. 150.



Model No. 7—Price \$23.00

MODEL HAND GRINDER



Model Grinder

The original family grist mill. Model Mills have harder burrs which run accurately, they are painted to a high finish, not dipped. The parts are smooth castings, carefully ground and fitted.

Model Mills last longer, do more and better grinding and have a broader range of usefulness.

List of Sizes We Carry

f. o. b. here.

No. and Capacity	Wt. Price
2— $\frac{3}{4}$ to $2\frac{1}{2}$ bu. per hr.	35 \$7.00
3—1 to 3 bu. per hr.	63 9.00
4—3 to 5 bu. per hr.	76 10.00

Black Hawk Feed Mill

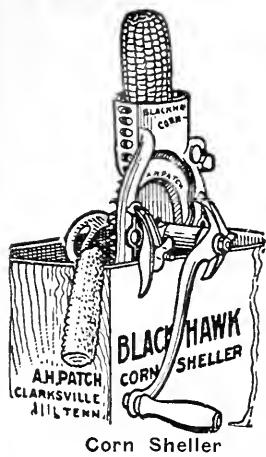
The grist mill without a fault. Light running, well built. It will last a lifetime. Grinds all kinds of grain, fine or coarse. Price \$4.25 f. o. b. here.



Black Hawk Feed Mill

Not every little thing is listed in these pages. If you do not see it, write us or ask the salesman for what you want.

Incubators, Brooders and all Poultry Supplies are on sale at 750 South Spring Street and at the branch store: 767 South Central Avenue. Call at the store more convenient to you. There is no parking limit on Central Avenue.



Corn Sheller

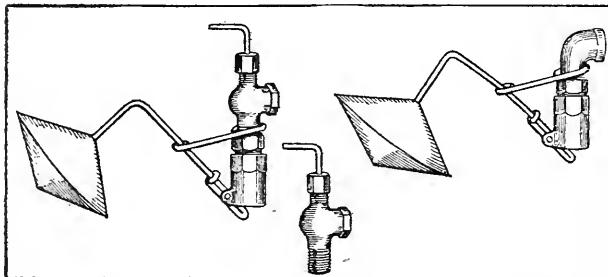
Black Hawk Corn Sheller

Shells easily and rapidly separates the cob from the corn. We give it special recommendation to poultry men. Price \$4.00 f. o. b. here. Weight 20 lbs. packed.

Healthy Hens Lay Eggs

To keep the hens healthy, feed them lettuce, kale, chard and sugar beets. Have some growing all the year round.

"THE WATER BOY"
**Automatic Fountains for Poultry
and Pet Stock**



No. 1

No. 2

No. 3

"The Water Boy" never forgets to fill the water jar, but furnishes just enough and no more.

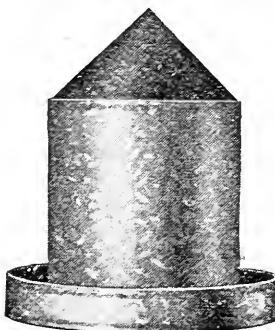
It makes no difference to "The Water Boy" how large the dish or how small the pan, if so much water is required, it gives that much and no more.

For the baby chicks, the flock of hens, ducks, pigeon baths, fish ponds, horse troughs or any vessel where a constant supply of water is needed without an attendant.

Number 1 is called "The Water Boy" Combination, as the upper part is a shut-off and pressure regulator combined with the "Water-Boy" automatic float valve. The advantages of this combination are to regulate any pressure and flow, act as individual shut-off in case automatic becomes clogged, thus avoiding disturbance of the rest of the water line, and the fowls need not be without water if the one needs repair. Price \$1.50 postpaid.

Number 2 is a shut-off threaded at both ends to allow for attachment to water pipe at one end and an automatic at the other, or may be used by itself as faucet or drip. Price 50c. postpaid.

Number 3 is "The Waterboy Automatic Valve," with St. Ell. Attached like a faucet to $\frac{1}{4}$ -inch pipe, fills any dish and shuts off automatically. No special dishes to buy. No leathers, springs or adjustments to get out of order. Price \$1.25 postpaid. "The Water Boy" automatic fountain fills the dish and shuts off the water automatically.

**A & M GALVANIZED
FOUNTS**

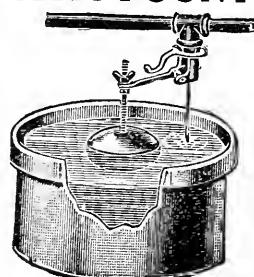
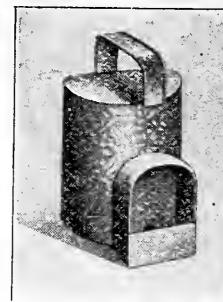
Made of heavily galvanized iron. Best of workmanship. Very sanitary and easily cleaned. Chicks cannot get into them or upset them.

1 qt. size, wt. $1\frac{1}{2}$ lbs....40c each
2 qt. size, wt. $1\frac{1}{2}$ lbs....50c each
4 qt. size, wt. 2 lbs....75c each
6 qt. size, wt. $2\frac{1}{2}$ lbs....85c each

F. O. B. Los Angeles

THE "DANDY" AUTOMATIC FOUNT

Something poultry raisers have been seeking for years—an automatic fountain that will do the work and keep at it. We have in the "Dandy" a fountain made of brass and nickel plated, with a ground valve which fits perfectly, thereby prevents clogging. Can be attached to any pipe same as faucet. Does not corrode or rust. Price 50c each, f. o. b. Los Angeles.

**FLAT BACK WALL
CHICKEN FOUNT**

This Star Fount is especially made for baby chicks and so arranged that they can not get into the water. They are made of tin and you can use your own Mason Jar.

Price 15c—Postpaid 20c.

A very useful fount for pigeons, chickens, or ducks. It hangs on a wall at any convenient height from the ground. Made of heavy galvanized iron.

1 qt. size— $\frac{1}{2}$ lb., price	\$.50
2 qt. size—1 lb., price .....	.90
1 gal. size— $1\frac{1}{2}$ lb., price	1.20
6 qt. size—3 lb., price	1.50

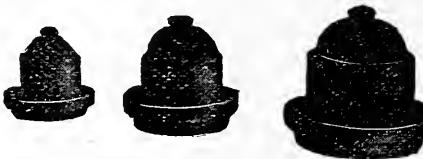
F.O.B. Los Angeles.

**SANITARY STONE
FOUNTS**

Postpaid 20c
Star Fount

Stone Fountain and Feeders are heavy and easily broken. They require special packing, therefore we advise that your purchase be made with your local dealer.

We list them here more especially for local customers. These fountains are made of stoneware and glazed and are very sanitary.



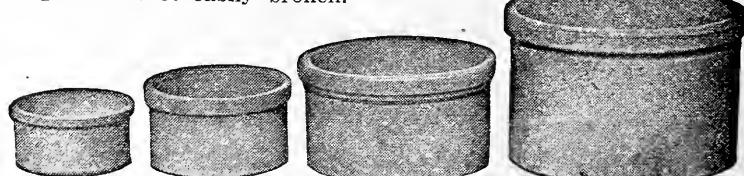
1 qt. size—4 lbs., Price 30c.
2 qt. size—6 lbs., Price 45c.
1 gal. size— $7\frac{1}{2}$ lbs., Price 55c.
2 gal. size— $9\frac{1}{2}$ lbs., Price 90c.

If ordering by mail or express add 25c for packing for one or more founts. F.O.B. Los Angeles.

Poultry and Rabbit Founts and Feeders

Cannot be sent by mail

These are made especially strong and durable for rabbits. The wide bottom prevents them turning over. Not easily broken.



Rabbit Drinking Founts

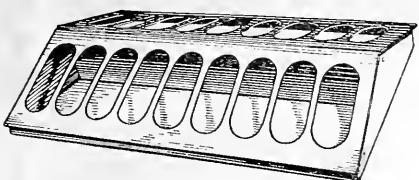
1 pt. 15c each (per dozen \$1.50). Weight 1 lb. each.
1 qt. 20c (per dozen \$2.00). Weight, 2 lbs. each.
$\frac{1}{2}$ gal. 30c each (per dozen \$3.00). Weight 4 lbs. each.
1 gal. 40c each (per dozen \$4.00). Weight 4 $\frac{1}{2}$ lbs. each.
6 qt. 60c each (per dozen \$6.00).
8 qt. 70c each (per dozen \$7.20). F. O. B. Los Angeles.



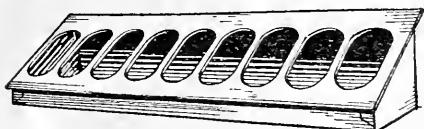
Rabbit Feeders

Rabbit Feeders. These are made of stoneware and glazed with a flanged edge for feeding rolled barley. The flanged edge prevents rabbit from throwing out the grain and wasting it. Comes in white, glazed.

No. 1, 20c each (1 dozen \$2.00). Weight 1 lb. (each).
No. 2, 25c each (1 dozen \$2.50). Weight 2 lbs. (each).
No. 3, 30c each (1 dozen \$3.00). Weight 2 $\frac{1}{2}$ lbs. (each).
No. 4, 40c each (1 dozen \$4.00). Weight 4 lbs. (each).

A & M Chick Feeders

A & M Double Chick Feeder



A & M Single Chick Feeder

Any of the following articles ordered by Parcel Post add 10c extra for packing and postage.

DOUBLE FEEDERS

12 in. 50c, wt. 1 lb.
18 in. 60c, wt. 2½ lb.
24 in. 70c, wt. 2 lb.
30 in. 95c, wt. 2½ lb.

SINGLE FEEDERS

12 in. 30c, wt. 1 lb.
18 in. 40c, wt. 1½ lb.
24 in. 50c, wt. 2 lb.
30 in. 75c, wt. 2½ lb.

INCUBATOR AND BROODER THERMOMETERS

No. 5774.



No. 5770



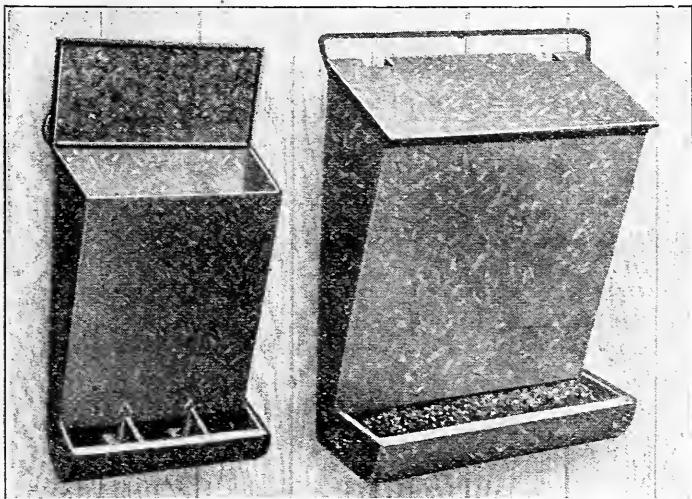
No. 3017

Many persons using Incubators and Brooders fail to understand the importance of having a thoroughly tested and reliable thermometer. Many a fine hatch is lost, and many a fine brood of chicks killed by using a poor thermometer. Use great care in purchasing a perfect thermometer. Our thermometers are thoroughly tested and accurate.

PRICES: 3017—\$1.00

5770—\$1.00

5774—\$0.75

DRY MASH HOPPERS

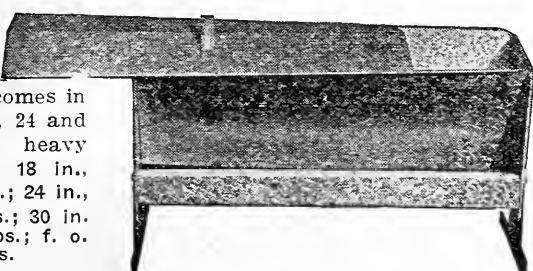
Made of heavy galvanized steel. Can be hung up at any convenient height.

Made in two sizes:

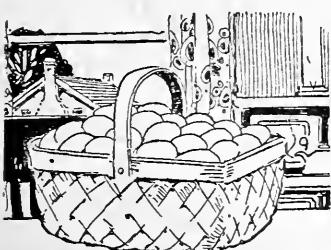
12 inches wide, weight 4 lbs.—Price.....\$1.25
13 inches wide, weight 6 lbs.—Price.....1.75

COMBINATION FEEDERS

2 compartments 8 in. wide, weight 3½ lbs.—Price.....\$.75
3 compartments 8 in. wide, weight 3½ lbs.,—Price.....1.00

GREAT WESTERN DRY MASH FEEDER

This feeder comes in three sizes: 18, 24 and 30. Made of heavy iron. Price: 18 in., \$2.00, wt. 7 lbs.; 24 in., \$2.50, wt. 9 lbs.; 30 in. \$2.75, wt. 10 lbs.; f. o. b. Los Angeles.

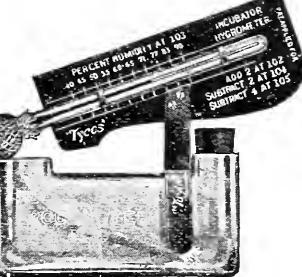
Kep-Egg**The Successful Egg Preservative**

Keeps eggs in perfect condition from one season to another. Apply to every portion of the egg's surface. Wrap in paper and put in a cool, airy place.

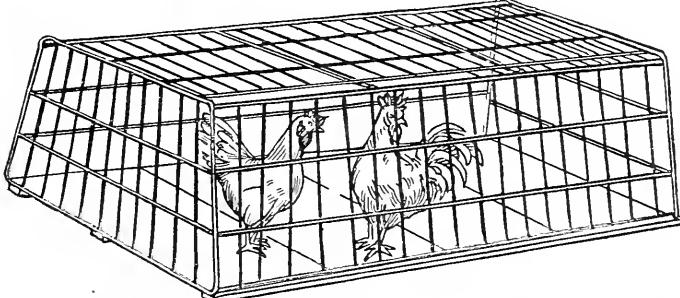
Kep-Egg is put up in porcelain cups.

Cup sufficient for 25 dozen eggs, 50c, by mail 60c.

Cup sufficient for 50 dozen eggs, 75c, by mail 85c.

**HYGROMETERS**

The moisture requirement during the hatching period is important. First week—65%, second week 60%, third week 55% moisture should be present. A Tyco Hygrometer will assist in this regulation. Price each \$1.75, postage and packing 10c extra.

WIRE SHIPPING COOP

This Coop is made of galvanized steel wire and bars which are electrically welded. It is strictly sanitary, will not rust, has bottom made of seasoned hardwood with cleats on top and on under sides. Bottom can be quickly and securely attached and can be quickly detached for shipping empty. It is built on taper, allowing crates to be telescoped when shipping empty. This coop is very light, weighing only 24 lbs. Is very strong; will last for years. Positively the most durable, economical and satisfactory shipping coop made.

Standard size, 27x41x13 in. high, weighs 24 lbs. Price \$5.00 each Turkey size, 27x41x20 in. high, weighs 27 lbs. Price \$6.00 each Extra bottoms for coop.....Price 1.50 each F. O. B. Los Angeles

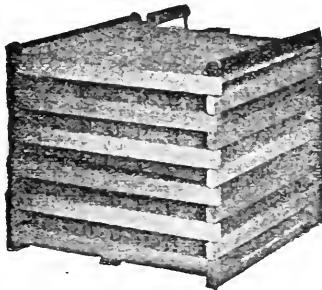
PARCEL POST AND SHIPPING BOXES

These boxes are made of heavy corrugated paper, three thicknesses, and are especially adapted for parcel post shipping:

1 dozen size.....	15c each	30 egg size.....	35c each
2 dozen size.....	25c each	50 egg size.....	.70c each
15 egg size.....	25c each	Postage Extra	

BABY CHICK SHIPPING BOXES

25 Chick size.....	\$.30 each
50 Chick size.....	.40 each
100 Chick size.....	.60 each
Postage extra	

**HUMPTY-DUMPTY EGG CARRIER**

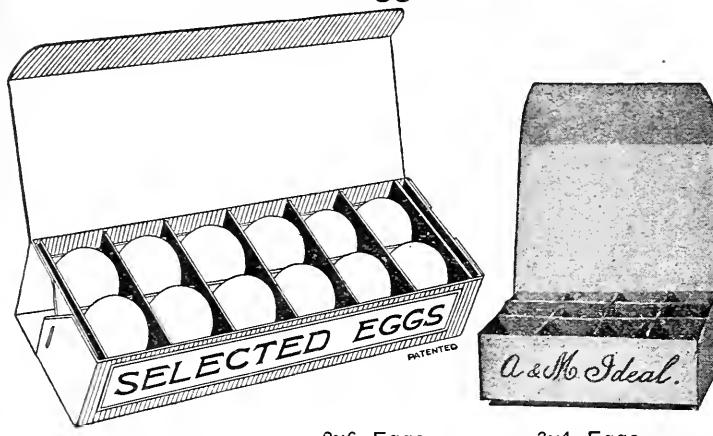
One of the handiest egg carriers on the market. This carrier will hold twelve (12) dozen eggs. Can be folded flat for shipment and is made of strong but light wooden slats fastened with strong steel wires. Very handy and something every poultryman should have. Price, 95c each, f. o. b. Los Angeles. Weight 6 lbs.

Thoroughbred Eggs

We have a small flock of pure, thoroughbred Rhode Island Reds, the extra large strain that weigh 6 to 8 lbs.

We offer, while they last, No. 1 fertile eggs for hatching @ \$5.00 per setting.

A & M Egg Boxes



2x6 Eggs

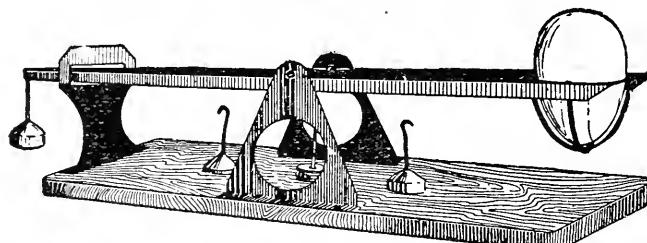
3x4 Eggs

These boxes are strong and neatly made, partitions full, thus protecting the eggs.

Very convenient for marketing eggs by the dozen.

Prices: 2x6—1 doz. 30c; 100, \$2.00.
3x4—1 doz. 25c; 100, 1.85.

GILT EDGE EGG SCALE



Is the only Egg Scale that will give the correct grading within a range of 17 to 30 ounces to the dozen. Standards of eggs as follows: No. 1 Pullet, 20 to 22 oz.; No. 2 Pullet, 19 to 20 oz. Price \$2.00; postpaid, \$2.10.

LINCOLN EGG GRADER



A simple and accurate scale. Place large end of egg in hole at right angles to bar. If grader remains stationary, egg is less than 18 ounces per dozen or fewer. If grader sets on 4 points, egg is between 18 and 22 ounces per dozen, or pullet. If grader is tilted on hole end egg is 22 ounces or more per dozen or standard. Price 60c postpaid.

SEARCHLIGHT EGG TESTER



Infertile eggs in an incubator mean a loss of time and money. The testing of eggs is a very important part of incubation and a little expense at the beginning will pay well in the end. The Searchlight will do the job quickly and do it well. It should be a part of your equipment, whether you are operating one incubator or a dozen. Postpaid \$5.10.

A & M Egg Testers

No. 2—Tin with opening on side 40c postpaid.
No. 3—Tin made to fit any lamp, 50c postpaid.

China Nest Eggs

We handle only the best grade of glass eggs, strong and durable. 75c dozen, 85c postpaid.



POULTRY INSTRUMENTS CAPONIZING SET

This set is one of the latest design. It is a combination of tools that can be used with one hand and seldom causes the operator to slip and cause the loss of the bird.

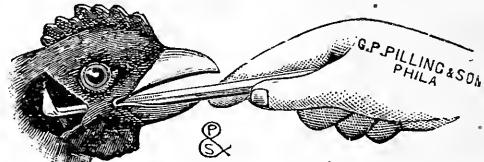
We carry the following sets:

Pillings Cornell \$5.50
Pillings Farmer 4.00
Pillings Special 5.00

We suggest that you use either the Cornell or Farmer. They are packed in a fine oak case. Each set contains full instructions.



PILLING ANGULAR KILLING KNIFE



Showing the Angular Killing Knife

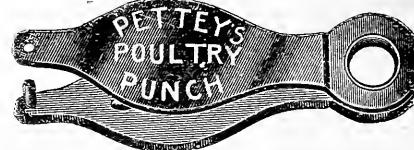
By simply turning the wrist the jugular vein and spinal cord are cut, thereby bleeding the fowl, allowing the feathers to be removed without using water. 85c postpaid.

PILLING FRENCH POULTRY KILLING KNIFE



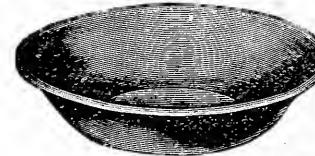
Every poultry raiser should have one of our Killing Knives. They are made of a finely tempered instrument steel with nickeled handle; will last a lifetime. Don't wait. Send for one now. Sent securely packed by mail on receipt of price. 85c postpaid.

PETTEY'S POULTRY PUNCH



One of the most convenient punches made. It is small and easy to operate, cutting a clean hole every time. Price 25c; postpaid 30c.

PIGEON NESTS



These are indurated fibre and much lighter than wood and easier to keep clean and don't become laden with vermin. Will not warp or break. The fibre is a non-conductor of heat and cold. Just right for squab breeders. Price 35c, \$3.75 per doz.



Reliable Spring Punch

This punch operates very easily because a spring reverses the action of the lever and brings it into position. It is always ready. Price 25c postpaid.

Newcomers and Beginners

If you contemplate raising poultry in your back yard just for home use, or for profit and you lack information just step into the store at 750 South Spring Street and have a talk with our poultry expert, Mr. Rogers.

If you would go into the poultry business on a commercial scale, we would advise you to visit some of the large poultry ranches most convenient.

If your new home is in San Fernando Valley we advise you to visit Runnymead No. 3 on the Ventura Boulevard, or the Holly Poultry Ranch on Sherman Way.

A Word to the House Wife

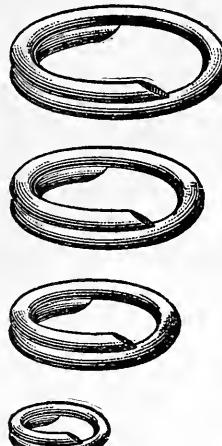
A dozen thorough hens are the best asset you can have on a city lot. Give them a clean house, clean feed, and clean water, they will give larger returns for the labor and expense than anything else on the place. The offal from the kitchen and garden, with some grain and grit will feed a dozen hens, and you will have no need for a filthy garbage can.

LEG BANDS FOR POULTRY

Spir-oL Leg Bands are made in six colors and all sizes, and are put on and taken off like a key ring. Can't drop off. Colors are black, white, red, yellow, blue, green, purple, light blue, maroon and pink. In ordering please state color wanted, also name of breed. Leghorn, Rocks, Rhode Island Reds or Turkeys. It enables us to fill the order satisfactorily. Prices:

12 Bands for.....	\$.15 postpaid
25 Bands for.....	.25 postpaid
50 Bands for.....	.50 postpaid
100 Bands for.....	.75 postpaid
500 Bands for.....	3.60 postpaid
1000 Bands for.....	7.00 postpaid

Spir-oL Band for Chick, Bantam and Pigeon size as follows: 12 for 15c; 25 for 25c; 50 for 40c; 100 for 65c; 500 for \$3.00; 1000 for \$5.25. These bands come in the same colors as given above for Poultry Bands.



Spir-oL Leg Bands

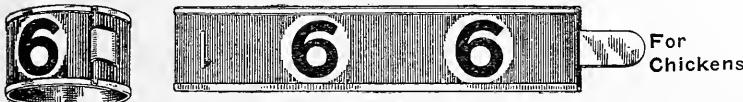
FLAT ALUMINUM LEG BANDS

These bands fit any variety fowls.



Price—(Numbers run from 1 to 1,000) (25 for 30c) (50 for 50c) (100 for 75c) postpaid.

ECLIPSE DOUBLE NUMBER COLORED—



Large double numbers on colored background. In 12 colors, 3 sizes. State breed and set. (12 for 40c) (100 for \$2.75) postpaid.

PIGEON DOUBLE NUMBER BANDS



Numbers Easily Seen
12 Colors, state variety

Prices: (6 Pairs 25c) (25 Pairs \$1.00) (50 Pairs) \$2.00 postpaid.

ELITE PIGEON BANDS

6 Pairs 25c 12 Pairs 50c 25 Pairs \$1.00 50 Pairs \$2.00
Carried in 6 Colors—Red, Blue, Green, Black, Yellow, White.

BUHACH POWDER

For dusting setting hens and baby chicks. No danger in using it. Pkgs. 25c.

PHENOLA

A combined white, cold water paint and disinfectant. It is a health insurance for stock and poultry.

1 lb.	Price \$.25
5 lb.	" 1.00
10 lb.	" 1.80
25 lb.	" 4.00

ALBATROSS PURITOL

Keeps the Coops and Barns White and Sanitary. Albatross Puritol is a white disinfectant paint in dry powdered form and is ready for use when mixed with cold water. It is one of the best forms of health insurance for stock and poultry. May be applied to any solid surface, such as wood, cement, brick, stone or iron, and when dry will be snow white.

It is economical in cost, is durable, easy to apply and is a powerful disinfectant. It kills mites, fly eggs and lice.

Price (1½ lb. pkg. 40c) (5 lb. pkg. 90c) postpaid. (25 lb. drum \$4.25) (50 lb. drum \$8.00) f. o. b. here.

TOBACCO STEMS

Use these in your nests and be free from lice and mites.

CONDIMENTS

Ginger, ground	Per lb. 35c.
Pepper, Chili ground	Per lb. 20c.
Pepper seed for poultry	Per lb. 20c.
Petlick—Salt Spools	Carton of 10 spools, 90c, by mail \$1.00

Packing and Postage 10c extra.

We are Sole Agents in the Southern Half of California for
DR. HESS' AND CLARK'S POULTRY FOODS AND REMEDIES



Prices quoted are f. o. b. Los Angeles. If wanted by mail add postage at zone rates. Liquids cannot be mailed.

We are the agents for this famous line of foods and remedies, and we cannot recommend them too highly. Every package is first-class, and will do all that is claimed for it. We want to call particular attention to Pan-a-cea, which is a tonic to help make hens lay. It should be fed all the year round in dry mash, and particularly at moulting time. A tablespoonful in soft feed once a day to every 20 or 25 hens keep the flock in excellent condition, and will without doubt increase the egg production.

Dr. Hess Instant Louse Killer is another article worthy of special mention. It may be used with good results for lice on poultry and stock, ticks on sheep, fleas on dogs, moths, bed-bugs and certain bugs infesting cucumber, squash, etc.

DR. HESS' POULTRY PANACEA Helps to Keep Poultry Healthy and to Make Hens Lay



The Dr. Hess' Poultry Panacea should be fed regularly the year round if you would obtain the best results from your flock. Car loads of this proven food tonic are sold in the large poultry districts of California. It is an excellent tonic for moulting time, is an egg producer, is an economical and highly satisfactory food. Send for Dr. Hess' Poultry Book and a free sample of Panacea. Prices: 1½ lb. pkg. 30c, 3 lb. pkg. 60c, 7 lb. pkg. \$1.25, 25 lb. pail \$3.50, 100 lb. drum \$12.00.

Dip and Disinfectant

Small	60c
Quarts	90c
2-quarts	\$1.50
1 gallon	\$2.25
5-gallon can	\$9.50

Small size	35c
Large size	75c
25 lb. Pails	\$3.50

Fly Chaser

1-qt. size	75c
2-qt. size	\$1.25
1-gal. size	\$2.00

4 oz. cans.....	25c
10 oz. cans.....	50c

Instant Louse Killer	
1 lb. pkgs.....	30c
2½ lb. pkgs.....	60c

White Diarrhoea Remedy.....	25c
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Healing Powder

4 oz. Can	25c
10 oz. Can	50c

Worm Powder

Package	50c
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STOCK TONIC

Small size	35c
Large size	75c
25 lb. Pails	\$3.50

PACKAGE GOODS

Charcoal (2 lbs.)	15c pkg.
Hydrated Lime (4 lbs.)	25c pkg.

(By Mail 10c. extra)

FEEDS

Our feeds are of the highest quality, only recleaned, sound grain being used in all our mixtures.

A & M Pigeon Feed	A & M Egg Mash
A & M Scratch Feed	A & M Chick Feed
Oyster Shell	A & M Growing Chick Feed
Granit Grit	Beef Scraps
Charcoal	Fish Meal
Bird Gravel	Pigeon Health Grit

Prices on Application

LITERATURE FOR POULTRYMEN

	Price	Pstd.
American Standard of Perfection	\$2.50	\$2.70
Artificial Incubation and Brooding	1.00	1.15
Barred White, Buff, Plymouth Rocks	1.00	1.15
Bantam Fowl .....	.50	.60
Broilers and Squabs .....	.60	.70
California Poultry Practice, by Mrs. Susan Swaygood	1.00	1.20
Call of the Hen, by Walter Hogan	2.00	2.25
Canary Breeding and Training.....	.35	.45
Chick Book .....	.50	.60
Diseases of Poultry	1.00	1.25
Eggs and Egg Farm, by Stoddard .....	.65	.70
Guinea Pigs	1.50	1.70
High Egg Production	2.00	2.25
Hog Book by W. S. Guilford	2.00	2.25
Leghorns, Brown, White and Buff	1.00	1.15
National Standard Squab Book	1.00	1.15
Plymouth Rocks, The	1.00	1.10
Profitable Culling and Selective Flock Breeding, compiled by Jackson & Curtis	1.50	1.70
Poultry Houses and Fixtures	1.00	1.15
Poultry Account Book, Gilt Edge.....	.40	.50
Poultry Culture	1.50	1.70
Practical Poultry Keeping, by Wright	2.00	2.20
500 Questions and Answers, by J. W. Darrow .....	.25	.30
Rabbit and Cavy, by Ritchey .....	.75	.80
Rabbits, Fur Bearing, by Ritchey .....	.50	.60
Rabbit Pedigree Blanks, per dozen .....	.25	.35
Rhode Island Reds	1.00	1.10
Successful Poultry Keeping	1.00	1.05
The New Egg Farm, by H. H. Stoddard	1.50	1.70
Turkeys, How to Grow Them, by Herbert Myrick	1.50	1.60
Two Hundred Eggs a Year per Hen .....	.50	.60
Use of Artificial Light to Increase Winter Egg Production	1.50	1.70
Wyandottes, The	1.00	1.10

LICENSE

For Killing Body Lice on Chickens

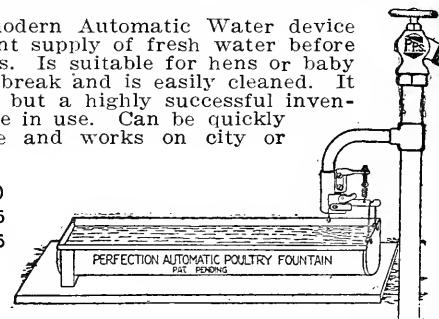
What Is License?

License is a Scientific Compound possessing strong lice killing and antiseptic properties. It is for destroying lice and scaly legs on chickens. It is applied Twice a Year, but many of our patrons report they have found one application a year sufficient. Considering therefore, that one tube will prove as effective as fair trials of its merits have shown, License is not only cheaper than lice powders and liquid lice killers, but it is also more conveniently handled and more easily applied. It has also given good satisfaction in canker, and for local application in chicken pox. License is marketed in collapsible tin tubes, with screw cap. Per tube, 60¢ postpaid.

PERFECTION AUTOMATIC FOUNTAIN

This is the most modern Automatic Water device which keeps a constant supply of fresh water before your fowls at all times. It is suitable for hens or baby chicks. No crocks to break and is easily cleaned. It is not an experiment, but a highly successful invention and thousands are in use. Can be quickly installed on any pipe and works on city or tank pressure.

24-inch \$2.00
30-inch 2.25
36-inch 2.75
F. O. B. Los Angeles



To Those Who Call at the Store

There are many kinds of feeders, water founts and other poultry requisites not listed on these pages, therefore do not hesitate to ask for anything you want, we probably have it.

The same is true of other lines, particularly in water sprinklers, gopher traps, garden tools, hose menders, plants, etc.

If you do not see what you want, ask for it.

If you like this catalog, tell your neighbor about it.

SUNSHINE SPRINKLER

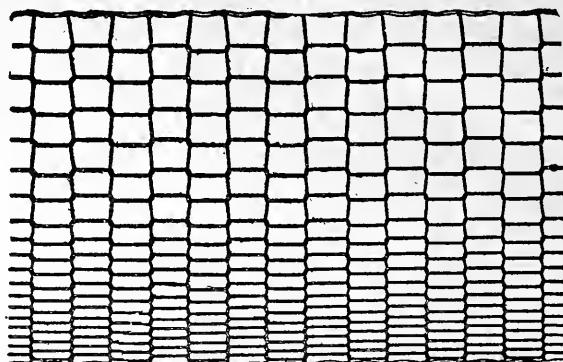
For Garden and Field. Write us about it.

Come and Inspect Our Stocks at our Stores
750 S. SPRING STREET

Market Branch: 767 CENTRAL AVE.

Warner Junior Poultry Fencing

Warner Junior Poultry Fence is made of No. 18 galvanized wire with No. 14 wire top and bottom, stay wires placed $\frac{4}{5}$ inches apart. At the bottom of the fence mesh is $1\frac{1}{8}$ inch and gradually widens as the top is reached.



Put up in 10 rod rolls.

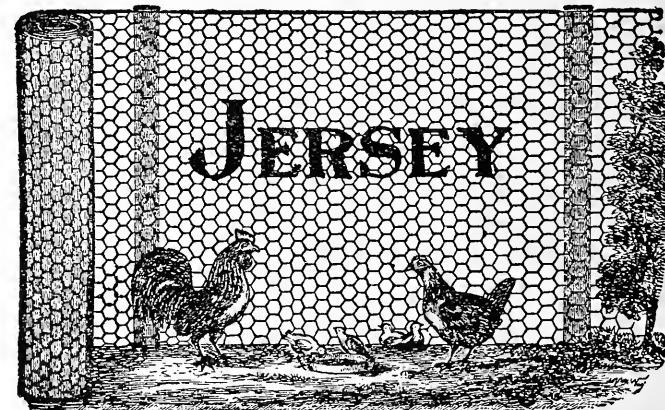
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Weight	Price
3 ft. wide, 33 lbs., per roll.....	\$4.00
4 ft. wide, 36 lbs., per roll.....	4.50
5 ft. wide, 40 lbs., per roll.....	5.25
6 ft. wide, 48 lbs., per roll.....	5.95

Subject to market fluctuations

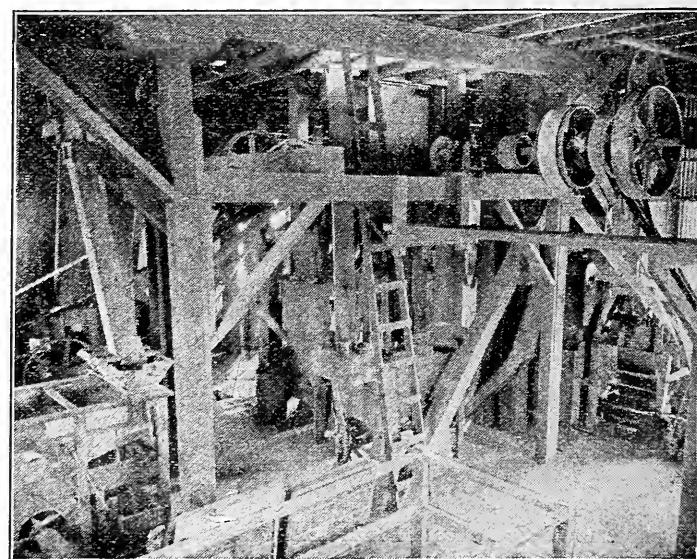
Jersey Poultry Fencing

This wire is made of the full 20 gauge hand drawn steel wire galvanized after weaving. Each roll contains 150 running feet.



We carry the following sizes:

	Wt. Price	Wt. Price	
1 ft. 2 in. mesh, 10..	\$ 2.15	1 ft. 1 in. mesh, 16..	\$ 4.95
1½ ft. 2 in. mesh, 16..	3.10	1½ ft. 1 in. mesh, 24..	7.10
2 ft. 2 in. mesh, 22..	3.90	2 ft. 1 in. mesh, 32..	9.10
3 ft. 2 in. mesh, 28..	5.35	3 ft. 1 in. mesh, 48..	12.40
4 ft. 2 in. mesh, 34..	7.15	4 ft. 1 in. mesh, 64..	16.50
5 ft. 2 in. mesh, 40..	8.90	5 ft. 1 in. mesh, 80..	20.65
6 ft. 2 in. mesh, 46..	10.70	6 ft. 1 in. mesh, 96..	24.75



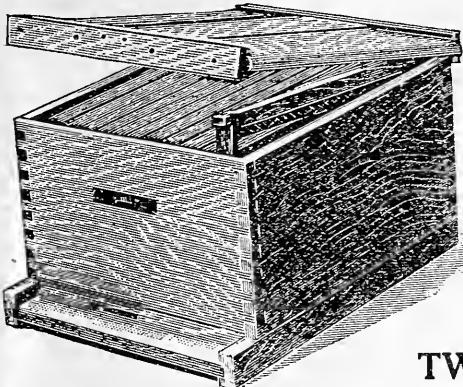
Some of the Machinery in Our Cleaning Mill

BEE SUPPLIES—Our New Department

Having had numerous inquiries in the past for Bee Hives and Bee Keepers' supplies, we wish to announce to our friends and patrons that we have now added a department in this line.

Those interested in the Bee keeping industry either in a small or large way will find our stock up to date.

Customers ordering by mail will be able to figure the cost of postage by consulting the first page of this catalog, also the weights opposite the article required.



ONE-STORY STANDARD HIVE WITH BEVEL FLAT COVER

This is the hive most generally used by large honey producers, as it is light and easily moved from one location to another. It is made of the highest quality white and sugar pine perfectly milled.

It is a 10 frame hive and measures 16 $\frac{1}{4}$ x20 inches and 9 $\frac{1}{2}$ inches deep, outside measurements.

Hives in the flat are furnished with nails, tin rabbits, reversible bottom board, bevel flat cover, Hoffman frames, no division board. If supers are desired these should be ordered extra, also comb foundation, and wire for frames.

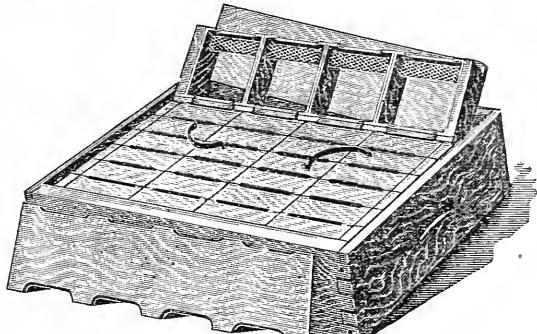
Ten Frame	One Story Hive as Described Above with	Weight	Price f.o.b.here
1 Nailed and Painted	No Foundation	26 lbs.	\$ 3.85
5 Knocked Down	No Foundation	129 lbs.	12.00
1 Nailed and Painted	With Full Sheets	28 lbs.	5.25

TWO BEEWAY SECTION SUPER

This section super 4 $\frac{1}{4}$ x4 $\frac{1}{4}$ x1 $\frac{1}{8}$ is the most commonly used. It takes slotted section holders, slotted wood separators, follower and springs, and is furnished with or without sections, and with or without full sheets foundation. This super may be used with any of the single or double walled hives tiered up one or more high. The 10 frame size contains 28 sections.

When the supers are filled ready to be removed, use the bee escape board to free the supers of bees.

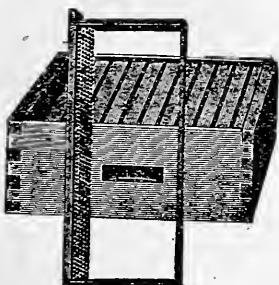
Super complete without sections includes nails, flat tins, super springs, slotted section holders, slotted separators, and follower.



Ten Frame	Description	Wt.	Price f. o. b. here
1 Nailed and Painted	Empty Super only, no Fittings	4 lbs.	\$.70
1 Knocked Down	Empty Super only, no Fittings	4 lbs.	.50
5 Knocked Down	Empty Super only, no Fittings	20 lbs.	2.20
1 Nailed and Painted	Super without Sections or Foundation	7 lbs.	1.65
1 Knocked Down	Super without Sections or Foundation	7 lbs.	1.10
5 Knocked Down	Super without Sections or Foundation	35 lbs.	5.00
1 Nailed and Painted	Super with Sections and Full Sheets	9 lbs.	3.00

Weight 100	Price Per 10	Price f. o. b. here
35 lbs.	\$.45	100
8 lbs.	.25	\$4.00
25 lbs.	.25	2.00
		2.00

Extra Slotted Section Holders for Supers
Extra Slotted Separators for Supers
Extra Follower Boards for Supers



Shallow Extracting Super 5 11/16 Inches Deep

SHALLOW EXTRACTING SUPERS 5 11/16 Inches Deep

This Super is used for producing extracted honey in shallow frames. This is the regular extracting super 5 11/16 inches deep and is furnished with shallow Hoffman frames, 5 $\frac{1}{2}$ inches deep with or without foundation.

Price furnished empty or with frames. No tin rabbits or division boards furnished.

Ten Frame	Description	Weight	Price f.o.b.here
1 Nailed and Painted	Empty Super Body, no Frames	5 lbs.	.75
1 Knocked Down	Empty Super Body, no Frames	5 lbs.	.55
5 Knocked Down	Empty Super Body, no Frames	24 lbs.	2.50
1 Nailed and Painted	Super with Shallow Frames, no Foundation	8 lbs.	1.65
1 Knocked Down	Super with Shallow Frames, no Foundation	8 lbs.	1.10
5 Knocked Down	Super with Shallow Frames, no Foundation	42 lbs.	5.00
1 Nailed and Painted	Super with Shallow Frames and Full Sheets	9 lbs.	2.50

HIVE-BODIES

This body is the standard hive of Langstroth dimensions, 10 frame size, 16 $\frac{1}{4}$ x20 inches and 9 $\frac{1}{2}$ inches deep. The hive body may be used either as a brood chamber, i.e., the lower story of the hive, or as a super, for extracted honey, thus forming a two-story hive.

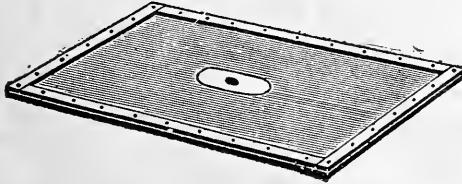
Standard 10 Frame	Description	Weight	Price f.o.b.here
1 Nailed and Painted	Without Frames	9 lbs.	\$1.30
1 Knocked Down	Without Frames	9 lbs.	.75
5 Knocked Down	Without Frames	47 lbs.	3.50
1 Nailed and Painted	With Frames, no Foundation	14 lbs.	2.20
1 Knocked Down	With Frames, no Foundation	14 lbs.	1.40
5 Knocked Down	With Frames, no Foundation	72 lbs.	6.50
1 Nailed and Painted	With Frames and Full Sheets	16 lbs.	3.60

Nails and Tin Rabbits Included with Bodies. No Division Board Unless Ordered.

INNER COVER

The inner cover here shown is $\frac{3}{8}$ inch thick with a wood rim and hole, for Bee escape to be inserted when needed. No escape is furnished at the following prices.

Ten Frame	Description	Weight	Price f.o.b.here
1 Nailed	Inner Cover or Bee Escape Board	2 lbs.	\$.39
1 Knocked Down	Inner Cover or Bee Escape Board	2 lbs.	.35
5 Knocked Down	Inner Cover or Bee Escape Board	10 lbs.	1.65



PERFECTION BEE-BRUSH



Made of Horse Hair bristle. It will give long wear. Black bristle, 7 ozs. 40c postpaid.

ROOT STEEL HIVE-TOOL

A very useful tool in the apiary for scraping frames and prying them loose, raising covers, etc. It is made of spring steel and will stand much strain.

10 inch	Weight 8 ozs.	70c Postpaid
8 inch	Weight 6 ozs.	60c Postpaid



PORTER BEE-ESCAPES

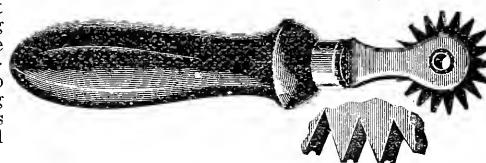
When taking off honey it is a great labor saver. It frees the supers so that no smoking is necessary. When placed between the brood chamber and super it will clear the super of bees in 12 to 24 hours.

Porter double escape without board	Wt. Postpaid	1 oz. 25c
Porter double escape with board nailed, 10 frames		2 lbs. 60c

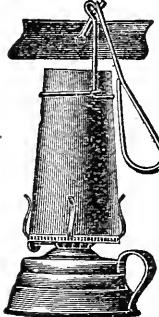
SPUR WIRE-IMBEDDER

This is an excellent tool for imbedding the wires into the sheets of Foundation. There is no danger of cutting the foundation as the teeth are broad and blunt.

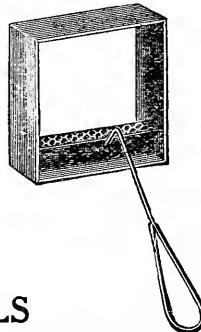
Price 40c postpaid. Weight 3 ozs.



ROOT FOUNDATION-FASTENER



These cuts show the Root Foundation fastener with lamp, and how it is used. It gives excellent results and is a rapid tool.



Root Fastener with lamp, Weight 8 ozs.—70c postpaid.

Root Fastener without lamp, Weight 2 ozs. 30c Postpaid.

ROOT BEE-VEILS

These veils are made from the very best material and constructed with a flexible steel hoop which keeps the veil away from the face and insures perfect fitting. They are light and durable.

Veil made entirely of silk tulle	2 oz.	\$1.65 Postpaid
Veil cotton tulle with silk tulle face	3 oz.	1.25 Postpaid
Veil cotton tulle throughout	3 oz.	1.15 Postpaid

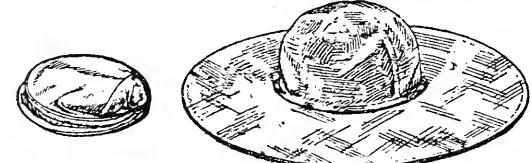


BEE-GLOVES

These gloves are made from material which is practically sting proof and are very durable, strongly stitched, and will stand hard wear.

Bee Gloves with fingers (small, medium or large). Weight $\frac{1}{2}$ lb. \$1.00 Postpaid.

ROOT COLLAPSIBLE BEE-HAT



folded small enough to fit in the pocket. Price \$1.00 postpaid. Weight 4 ozs.

BOOKS

ABC and XYZ of Bee Culture. The largest and most complete works on Bees in the world. The best book for all bee-keepers. 7x10 inches. Price \$3.50.

Langstroth on the Hive and Honey Bee; illustrated, 4 $\frac{1}{2}$ x7 $\frac{1}{2}$ inches, 392 pages, Price \$1.50.

How to Keep Bees. Describes in the clearest language the necessary details, 5x7 $\frac{1}{2}$ inches, 228 pages, Price \$1.50.

First Aids to Bee-keepers. A valuable book for beginners. Price 25c.

Answers to Bee Questions Commonly Asked. Crammed with practical pointers, 72 pages. Price 10c.

Anything not listed here can be supplied at current market rates.

SMOKERS

This is one of the most important implements in the apiary. They will burn any fuel but greasy waste is recommended as it burns better and gives a dense pungent smoke.

	Weight	Price
Standard Tin Smoker	2 lbs.	\$1.60 Postpaid
Junior Tin Smoker	1 $\frac{1}{4}$ lbs.	1.35 Postpaid

QUEEN-EXCLUDERS (Honey-Boards)

Honey-boards are used in the production of extracted honey, to confine the queen to the brood chamber, and so prevent her from laying eggs in the supers. The spaces are just large enough to allow the working bees to get through. When sections are used the excluder is not so necessary as a queen rarely enters sections with separators.

We recommend the excluder made of wood and seven wire strips as it presents smooth round edges for the bees, instead of the sharp edges as in the perforated zinc.

Name and Size	Size	Wt.	Price	Price
10 Frame 7 wire and wood	16 $\frac{1}{4}$ x20	27 lbs.	85c	\$8.00
10 Frame Unbound Zinc	16 x20	8 lbs.	43c	4.00
F. O. B. Here.				

WIRE FOR FRAMES

This wire is for securing foundation or combs in frames and to eliminate the danger of sagging. 670 feet required for 100 Hoffman Frames.

Sizes	Feet	Weight	Price	Postpaid
$\frac{1}{4}$ lb. spools	350	6 oz.	25c	
1 lb. spools	1,400	18 oz.	60c	

ROOT'S CALIFORNIA COMB FOUNDATION AIRCO PROCESS

Only the best wax goes into this foundation and it is thoroughly analyzed before being used.

You can't afford to be without the best.

Medium Brood	Per Lb.	1 lb. bx.	2 lb. bx.	5 lb. bx.	25 lb. bx.	50 lb. bx.
Thin Super	"	78c	75c	73c	71c	70c

SECTION HONEY-BOXES

Every Bee Keeper recognizes the necessity of using sections of only the very best quality when working for comb honey. These sections are polished on both sides and uniform in thickness.



The section most commonly in use is the $4\frac{1}{4}$ x $4\frac{1}{4}$ x $1\frac{1}{8}$ inches with 2 bee ways.

Quantity	Grade	Weight	Price
100	A	7 lbs.	\$1.60
250	A	18 lbs.	3.90
500	A	35 lbs.	7.50
1,000	A	70 lbs.	15.00

THE HOFFMAN FRAME

This is the most popular frame and is furnished with all hives unless otherwise specified. It is a self spacing frame and a great labor saver, and this particular frame can be moved without having to move others to get room. The combs are all uniformly spaced. The end bars are $\frac{3}{8}$ inch thick, 1 inch wide at the narrowest part and $1\frac{1}{8}$ inches at the widest. The top bars are $1\frac{1}{16}$ x19 inches long.

Foundation and starters are easily fixed in these frames.

SHALLOW EXTRACTING-FRAMES

These are similar to the regular Hoffman frames, but with top bar $1\frac{1}{16}$ inch wide, $\frac{3}{8}$ inch thick, 19 inches long with single groove. Bottom bar is $\frac{3}{4}$ inch wide and $\frac{1}{4}$ inch thick, the end bars are Hoffman self spacing $\frac{3}{8}$ inch thick and $5\frac{3}{8}$ inches long.

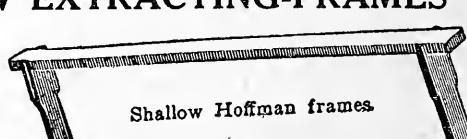
Price of Frames, Nailed per 100—f. o. b. here:
Empty, Empty, Full Sheets
No Wire Wired Wired

Weight	Empty	Empty	Full Sheets
Per 100.	No Wire	Wired	Wired

Hoffman Frames 90 lbs. \$11.50 \$13.00 \$31.50
Shallow Ext. Frames 50 lbs. 9.20 11.50 18.40

When ordering frames in less than 100 lots, add one fifth more to the 100 rate to cover cost of packing. If ordered with hives, no extra charge will be made.

Price of Frames, Knocked Down—f. o. b. here:
10 100 500 Wt. 100
Hoffman Frames \$.66 \$6.00 \$27.50 50 lbs.
Shallow Extracting .55 5.00 22.00 20 lbs.



Shallow Hoffman frames

HONEY-EXTRACTORS

This is only a 2 frame extractor made for those who have only a small number of colonies. It is a perfectly reliable machine at a small cost. The pockets do not swing therefore the combs must be taken out to reverse.

Novice Extractor: Pockets, 9 $\frac{1}{2}$ x16; Gear Ratio, 5 to 1; Diameter, 17 in.; Weight, 78 lbs.; Price \$30.00 f. o. b. here.

Bird Department



Birds and Bird Cages; Pet Animal Food, Remedies and Supplies

That we may add to the cheer of our many patrons that often crowd our store at 750 S. Spring Street, we have hundreds of imported Canaries that sing, warble, or roll in a most charming manner that delights the visitor. Then too, we have an aquarium of a most wonderful collection of Gold Fish.

What can be more beautiful in your living room than an aquarium of gold fish, and more interesting, with so little expense and trouble. A visit to our aquarium will be a delight to you.

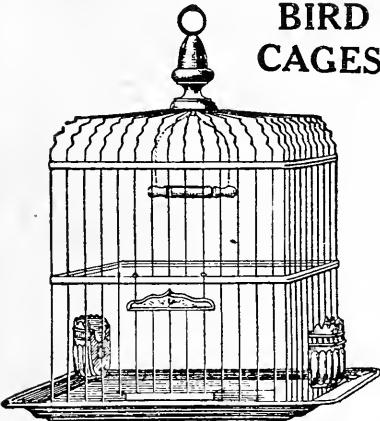
See our assortment of globes and other beautiful aquariums, ornaments, waterplants, fish food, and supplies.

In this department we have for sale hundreds of canaries, all best singers, from which to choose. We have Parakeets and Parrots that are beautiful and entertaining.

We have food, remedies and requisites for Birds, fish, dogs, cats, and for all pet animals.

You are invited to visit this department if for no other purpose than to hear the canaries sing or to consult our salesman.

BIRD CAGES



Green Trimmed

	Each		Each		
No. 270.	9 x 6 inches	\$2.50	No. 273.	10½x7½ inches	3.50
No. 271.	9½x6½ inches	3.00	No. 274.	11 x 8 inches	4.00
No. 272.	10 x 7 inches.	3.25	No. 275.	11¼x8¾ inches	4.25

White Enamel Trimmed with Green

	Each
No. 241.	7½x7½ in.
No. 242.	8 x 8 in.
No. 243.	8½x8½ in.
No. 244.	9¼x9¾ in.

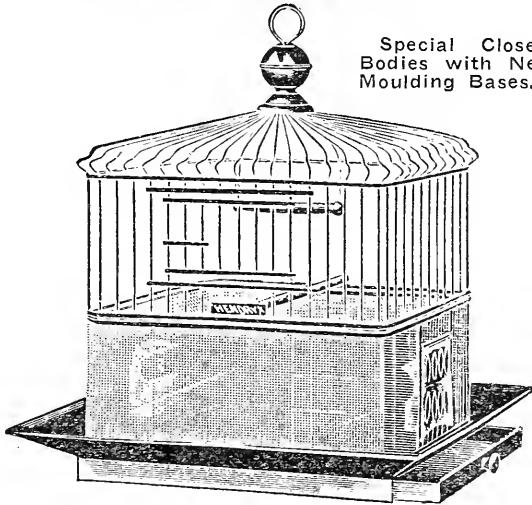
All White Enamel Opal Cups

	Each
No. 170.	9 x 6 in.
No. 171.	9½x6½ in.
No. 172.	10 x 7 in.
No. 173.	10½x7½ in.
No. 174.	11 x 8 in.
No. 175.	11¼x8¾ in.

Brass Finch Cages



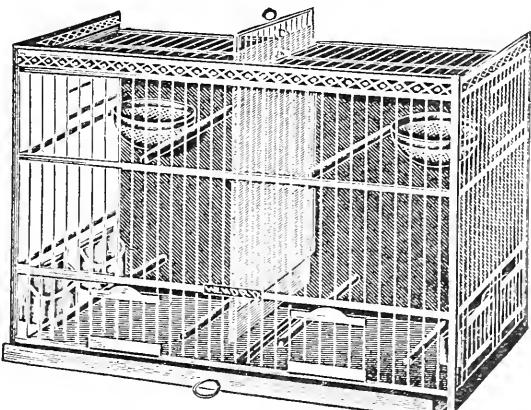
Special Close Space Bodies with New Style Moulding Bases.



	Each
No. 606.	Guard 10½x7½ inches.
No. 608.	Guard 10¾x7¾ inches.
No. 610.	Guard 13 x 8½ inches.
No. 1606.	Guard 10½x7½ inches.
No. 1608.	Guard 10¾x7¾ inches.
No. 1610.	Guard 13 x 8½ inches.

Japanned Breeding Cages

GREEN TRIMMED



With Solid and Wire Partitions, Metal Drawer and Closed Back, 4 Glass Cups, 6 Perches and 2 Nests

17¼ in. long, 8¾ in. wide, 13¼ in. high.....	each \$ 7.00
20 in. long, 10 in. wide, 14 in. high.....	each 8.00
22 in. long, 11 in. wide, 15¾ in. high.....	each 9.00
24½ in. long, 12¼ in. wide, 16¾ in. high.....	each 10.00

Just a word about the cleanliness in regard to your canary or canaries. A canary cannot be expected to keep clean if his cage or aviary is not kept clean. If you use a cage in the house, whenever necessary give it a washing in cold water; (hot water will remove the lacquer of a brass cage). Give the bird or birds a bath daily in summer and twice a week in winter. Take the bath dish out of the cage as soon as the bath is given. Always keep fresh, clean water in the drinking water containers. Use nothing but the very best re-cleaned seeds as feed. You will always find A & M bird seed clean and fresh. We take the bird's health into consideration when offering our bird seed for sale.

Clean the cage thoroughly daily. Be sure to scrape the perches in the cleaning. Keep a liberal supply of gravel in the bottom of the cage or aviary and be sure that the gravel is not dirty or dusty. By all means, at all times keep your bird out of drafts. Place him in a sunny place whenever possible.

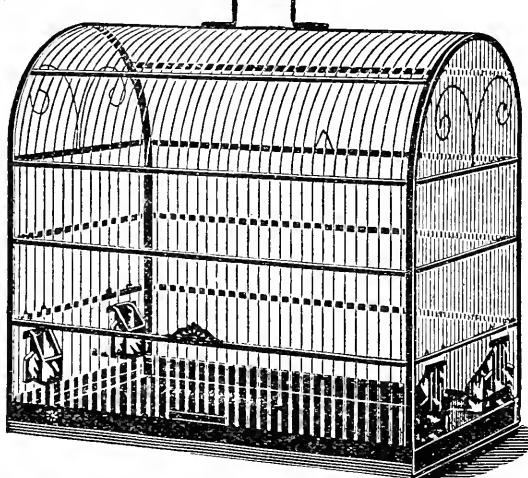
If you want advice concerning your pets, see our salesman who is in charge of this department.

CAGE SUNDRIES

	Each
Wire Bound Cloth, per ft.	.35c
Single Spring	15c
Single Spring, Heavy	20c
Single Spring, Extra Heavy	30c
Double Spring	30c
2 ft. Chain and Spring	30c
10 in. Cage Hanger	20c
12 in. Cage Hanger	25c
Cup Open Opal	15c
Cup Open Crystal	15c
Cup Tulip Opal	20c
Cup Tulip Crystal	15c
Cup Inside Opal	25c
Cup Round Opal	10c
Cup Food Holder	10c
Canary Baths, Opal, Large	20c
Bath Houses	90c
Swings, Canary	10c
Wire Nest with Swivel	15c
Parrot Cups, Iron Tinned	50c

Japanned Mocking Bird Cages

GREEN TRIMMED



With Metal Drawer (opening in front)

16 in. long, 9 1/2 in. wide, 14 1/4 in. high.....	each \$ 6.00
17 3/4 in. long, 10 1/2 in. wide, 16 1/4 in. high.....	each 7.00
20 1/4 in. long, 11 1/4 in. wide, 18 1/2 in. high.....	each 8.00
22 in. long, 13 in. wide, 19 1/4 in. high.....	each 9.00
24 in. long, 14 1/4 in. wide, 21 1/4 in. high.....	each 10.00

These Cages are suitable for Mocking Birds. Are constructed all of Metal.

PARROTS AND PARAKEETS

In season, from November to March, we offer talking parrots as follow:

Panamas, Yellow Heads and Red Heads, Cockatoos, and Amazons. We also have finger tame Bee Bees. These are lovely, tame little birds, fine for the children.

Half Moon and Shell Parokeys. We will be glad to quote prices on demand.

A & M WONDERFUL CANARIES

We have at all times a complete showing of domestic and imported canaries, both male and female. We are exceedingly careful at all times to keep nothing but the very highest grade canaries obtainable for distribution, and can assure you that any of our birds will give complete satisfaction.

First, our imported St. Andrewburg Roller Canaries, with their soft, pleasing, beautiful bell-note that inspires the mind and brings happiness to the heart of everyone that hears them, will surely become a treasure in any home.

The prices of these wonderful songsters are \$12.50 and \$15.00. Some extra select at \$25.00 each. The \$25.00 Rollers make wonderful breeders and trainers. The colors of these birds range from pure yellow to a dark green. We can also supply female imported St. Andrewburg Rollers at \$5.00 each.

Second, comes the imported Hartz Mountain Triller, or Warbler Canaries. The song of these canaries is more loud than the Roller but beautiful in its variation. A great many folks like them equally as well as they do the Roller. The prices of these canaries are \$7.50 and \$10.00. Extra select for training and breeding purposes at \$15.00. The females are \$2.50 each. They have the same coloring as the Roller.

Third, comes the domestic warbler canary. These birds have a loud song similar to the imported warbler, and are of the same color variations. Our stock are all very good singers and may be kept in a cage in the house or in an outdoor aviary. The prices for the male birds are \$5.00 and \$7.50. Extra select at \$10.00. Females are priced at \$1.50 each.

Gold Fish

Just step in and see our aquarium of 1,000 beautiful gold fish. No two alike.

We have a complete line of foods and remedies for your pet dog.

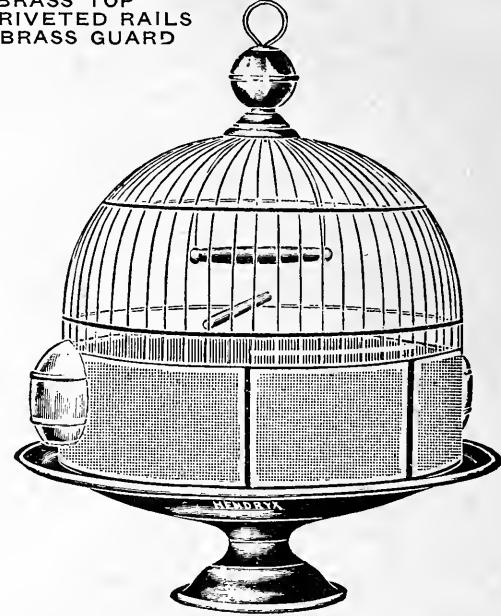
If you want a thoroughbred dog write us stating what breed you desire.

Parrot Cages

	Each
No. 70P.	12 inches diameter, 19 3/4 inches high.....
No. 75P.	13 inches diameter, 21 1/2 inches high.....
No. 80P.	14 inches diameter, 22 inches high.....
No. 85P.	15 1/2 inches diameter, 24 inches high.....
No. 90P.	17 1/2 inches diameter, 29 inches high.....

Brass Cages

BRASS TOP
RIVETED RAILS
BRASS GUARD



No. 274.	Body, 10 inches diameter. Height, 16 in.	\$5.50
No. 275.	Body, 11 inches diameter. Height, 16 1/2 in.	6.50
No. 276.	Body, 11 9/16 inches diameter. Height, 18 in.	7.50

HENDRYX BIRD CAGE STANDARDS

No. 17L.	Ivory stand with solid brass arm.....	\$5.00
No. 18A.	Polished brass, solid brass arm.....	7.00
No. 18D.	Dull brass, solid brass arm.....	7.50
No. 18E.	All Bronze, solid bronze arm.....	8.00
No. 19A.	Polished brass, solid brass circular arm.....	8.00
No. 19D.	Dull brass, solid brass circular arm.....	8.50
No. 19B.	Bronze, solid bronze circular arm.....	8.75

These stands are the very latest in bird cage stand construction and are entirely out of the ordinary in design. They are not bulky and make a pleasing fixture in any home. We might call your attention also to the very low prices of these stands.

BIRD FOOD AND REMEDIES

(Postage Extra on all Bird Supplies)

	Per Pkg.
A & M Roller Mixture. Consisting of best clean seeds.....	20c
A & M Bird Seed Mixed.....	15c

	Per Lb.
A & M Plain Canary	15c
A & M Imported Sweet German Rape	25c
A & M Imported Essex Rape	20c
A & M Small Rape	15c
A & M Bird Oats	15c
A & M Millet, Small Yellow	10c
A & M Millet, Large	10c
A & M Canary Lettuce	50c
A & M Maw Seed	50c
A & M Thistle Seed	50c
A & M Sunflower Seed	15c—2 for 25c
A & M Parrot Food	20c
A & M Hemp Seed	15c

	Each
Egg Flake and Fruit Mixture (Spratts)	25c
Cod Liver Oil Nesting Food	15c
Song Restorer	15c
Red Mite Liquid	25c
Mite Powder and Blower	25c
Bird Bitters	25c
Bird Manna	2 for 25c—15c
Medicated Seed	2 for 25c—15c
A & M Color Food	25c
A & M Nestling	25c
A & M Song Food	25c
Canaradyne	25c
Pennakura	15c
Parrot Tonic	30c
Bird Tonic Henning	30c
Pollicracker	Pkg. 20c
Cuttle Bone .....	.05c
Mexican Foot Salve	25c
Mocking Bird Food	50c
Ant Eggs	15c
A & M Gravel	10c
Gravel, Red	20c

PLANT DEPARTMENT—750 S. Spring St.

See Page 59.

Here we have on hand in their proper season, a full line of flowering plants for out door bedding, and vegetable plants for the garden. Also potted flowering plants for gifts and decorative purposes.

In addition to the plants listed below, we have other varieties that cannot be sent by mail. We invite you all, but especially do we invite those of you who have built your home and would have seeds, plants and shrubbery with which to make it home-like and attractive.

FLOWERING PLANTS FOR OUT-OF-DOOR BEDDING

When desired by mail, add 5c to these prices for packing and postage.					
Asters	50c doz.	Delphinium	75c doz.	Heliotrope	15c ea. up
Armeria	15c ea.	Dusty Miller	75c doz.	Hollyhocks	75c doz.
Ageratum	15c ea.	Double Mar-		Lantana	15c ea. up
Balsam	50c doz.	guerite	15c ea.	Lotus	15c ea.
Begonias	50c doz.	Dianthus	50c doz.	Lobelia	50c doz.
Coleus	20c ea.	Dbl. Daisy	50c doz.	Marguerites	15c ea.
Cornflower	50c doz.	Foxglove	75c doz.	Marigold	50c doz.
Canterbury		Forget-		Petunia	75c doz.
Bells	75c doz.	me-not	50c doz.	Phlox	
Coreopsis	50c doz.	Gerbera	50c ea. up	Annual	50c doz.
Cosmos	50c doz.	Gazania	10c ea.	Hardy	15c ea.
Carnations	1.00 doz.		1.00 doz.	Pentstemon	75c doz.
Cuphea	15c ea.	Gaillardia	10c ea.	Poppy	
Calendula	50c doz.	(Flattened)	50c doz.	Mexican	15c ea.
Cineraria		Geranium	15c ea.	Painted	
Celosia	50c doz.	Geum	50c doz.	Daisy	50c doz.
Chrysanthemum	20c ea.				

VEGETABLE PLANTS

			— Postpaid —		f.o.b. here		Weight
On Hand		Doz.	Per 100	Per 1000			
Artichoke, Green Globe.....	Jan. 1st to May 1st	\$2.00	\$12.50	\$....			... Lbs.
Asparagus, Palmetto and Argenteuil.....	Jan. 1st to May 1st	.50	2.50	12.00	50	"	
*Cabbage, Winnigstadt, Danish Ballhead.....	All Year	.25	.75	4.00	50	"	
*Cauliflower, Snowball, Early Pearl.....	Sept. 1st to April 1st	.25	1.00	5.00	50	"	
Chives			1 bunch 15c; 3 bunches 40c.				
Egg Plant, New York Spineless.....	April 1st to Sept. 1st	.75	4.50	35.00	100	"	
Horse Radish, Bohemian	January to May 1st	.25	1.50	10.00	25	"	
*Pepper, Anaheim Chili	March 15th to Sept. 1st	.30	2.00	15.00	20	"	
" Chinese Giant	March 15th to Sept. 1st	.30	2.00	15.00	20	"	
" Pimiento	March 15th to June 1st	.30	2.00	15.00	20	"	
Rhubarb, Wagner's Giant.....	January to May 1st	1.50	10.00	....	...	"
*Sweet Potato, Yellow Jersey.....	March 15th to July 1st	.25	1.25	5.00	20	"	
Sweet Potato, Nancy Hall	April 1st to June 1st	.25	1.50	6.00	20	"	
*Tomato, A & M First Early.....	Feb. 15th to June 1st	.30	1.50	10.00	20	"	
" Beefsteak	Feb. 15th to June 1st	.30	1.50	10.00	20	"	
" Stone	April 1st to Sept. 1st	.30	1.50	10.00	20	"	

*After May 1st Tomato Plants Grown Outside.

The Panama Rhubarb—each 50c postpaid.

Announcement

Call at Our Nursery, 1934 East 15th Street

A mainly traveled street between Alameda and Santa Fe Ave.

No Parking Limit

Here we have a select assortment of fruit trees, deciduous and citrus.

Grapes of every sort, including two of the famous Persian varieties.

Berries of every variety including the delicious La France Raspberry and the popular shipping variety the Rannerlee Raspberry.

Only the best varieties of strawberries; Carolina, Banner, Improved Klondike and the delicious Fendalcino.

It is our ambition to give the best possible service to the newcomer and home-builder.

NURSERY CATALOG

With this object in view we have prepared a catalog of everything we have at the nursery. It contains cultural instructions and much pertinent information given after the manner pursued in this catalog of seeds.

We want every one who may be interested in home gardening to write for this nursery catalog or get it at the counter.

Our nursery is right by our main office where we have arranged a retail counter to accommodate those who would have seeds as well as plants.

When you would have plants or trees, call at the nursery.

Come In Your Auto—No Parking Limit



California Golden Rod

A beautiful cluster of golden flowers growing upright as appears in the picture. One plant will multiply to fifty or more by the second season. (Price per plant 15c) (2 plants 25c) postpaid

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A & M Planting Calendar for Southern California and Similar Climates

JANUARY

VEGETABLES—Seeds of Asparagus, Beans, Beets, Brussels Sprouts, Cabbage, Carrots, Chervil, Chicory, Corn Salad, Cress, Egg Plant, Horse Radish, Kale, Kohl Rabi, Lettuce, Mustard, Onions, Parsley, Peas, Peppers, Potatoes, Radish, Rhubarb, Salsify, Spinach, (Winter) Tomatoes, Turnips.

FLOWERS—Sow seeds of hardy annuals in the open ground, Acroclinium, Alyssum, Antirrhinum, Calendula, Calliopsis, Candytuft, Centaurea, Annual Chrysanthemums, Clarkia, Larkspur, Lupin, Mignonette, Nigella, Poppies, California Poppy, Wild Flower Seed and Sweet Peas.

PLANTS of Aquilegia, Antirrhinum, Canterbury Bells, Carnation, Digitalis, Pansy, Pentstemon, Shasta Daisy, Stocks.

BULBS of Amaryllis, Agapanthus, Caladium, Gladiolus, Liliums, Narcissus, Ranunculus and Tuberous.

FEBRUARY

VEGETABLES—Seeds of Asparagus, Beets, Beans, Cabbage, Carrots, Celery, Chervil, Chives, Chicory, Corn, Cress, Corn Salad, Cucumbers, Egg Plant, Horse Radish, Kale, Kohl Rabi, Lettuce, Mustard, Onions, Parsnip, Peas, Peppers, Potatoes, Sweet Potatoes, Squash, Radish, Rhubarb, Salsify, Spinach, (Summer) Tomatoes, Turnips.

FLOWERS—Sow Seeds in open ground; Acroclinium, Antirrhinum, Calendula, Calliopsis, Centaurea, Early Flowering Cosmos, California Poppy, Larkspur, Linum, Lupins, Mignonette, Nemophila, Nigella, Poppies, Scabiosa and Sweet Peas.

Sow in seed boxes—Balsam, Begonia, Coreopsis, Gaillardia, Hollyhock, Hunnemannia, Lobelia, Mimulus, Pentstemon, Petunia, Perennial Poppies, Salvia, Stocks and Viola Cornuta.

PLANTS of Aquilegia, Antirrhinum, Carnation, Canterbury Bells, Digitalis, Pansy, Pentstemon, Shasta Daisy, Stocks, Verbena.

BULBS of Amaryllis, Caladium, Cannas, German Iris, Gladiolus, Liliums, Ranunculus and Tuberous.

MARCH

VEGETABLES—Seeds of Artichoke, Asparagus, Beets, Beans, Cabbage, Chives, Chicory, Chervil, Corn, (Sweet and Field) Cucumbers, Egg Plant, Kale, Lettuce, Melons, (Musk and Water) Okra, Onions, Parsley, Parsnip, Potatoes, Sweet Potatoes, Pumpkin, Radish, Rhubarb Seed, Salsify, Spinach, (Summer) Squashes, Tomatoes.

FLOWERS—Sow seeds in open ground; Acroclinium, Ageratum, Alyssum, Antirrhinum, Arctotis, Amaranthus, Balsam, Brachycome, Bartonia, Calendula, Calliopsis, Candytuft, Centaurea, Clarkia, Annual Chrysanthemum, Early Flowering Cosmos, Daisies, Four O'Clocks, Godetia, Gomphrena, Gypsophila, Helichrysum, Larkspur, Linum, Lupin, Marigold, Mignonette, Nasturtium, Nemesis, Nemophila, Nigella, Phlox, Poppy, Scabiosa, Sunflower and Sweet Peas.

Sow in seed boxes or with some protection for transplanting later: Asters, Begonia, Bellis, Daisy, Celosia, Columbine, Canterbury Bells, Coreopsis, Cyclamen, Dahlia, Gaillardia, Gerbera, Heliotrope, Hunnemannia, Lobelia, Matricaria, Myosotis, Pentstemon, Petunia, Poppies, Salvia, Shasta Daisy, Statice, Sweet William, Verbena, Viola, Wallflower, Zinnia. Sow seeds of Vines.

PLANTS of Begonia, Delphinium, Gerbera, Pansy, Romneya Coulteri, Shasta Daisy and Verbena, Roses.

BULBS of Caladiums, Cannas, Dahlias, Gladiolus, Tuberous.

APRIL

VEGETABLES—Seeds of Artichoke Seed, Asparagus, Beets, Beans, Carrots, Cabbage, Celery, Chives, Chervil, Corn, (Sweet and Field) Cress, Cucumber, Egg Plant, Kale, Lettuce, Melons, (Musk, Water, and Casabas) Okra, Onions, Parsley, Peas, Peppers, Parsnip, Potatoes, Sweet Potatoes, Pumpkin, Radish, Rhubarb Seed, Salsify, Spinach (Summer) Squash, Tomatoes.

FLOWERS—Seeds of Abronia, Acroclinium, Ageratum, Antirrhinum, Amaranthus, Asters, Balsam, Aquilegia, Begonia, Bellis, Brachycome, Calendula, Calliopsis, Candytuft, Canterbury Bells, Carnation, Annual Chrysanthemum, Celosia, Centaurea, Clarkia, Coreopsis, Cosmos, Cyclamen, Dahlia, Daisies, Delphinium, Digitalis, Dianthus, Gaillardia, Godetia, Gerbera, Gypsophila, Gomphrena, Heliotrope, Helichrysum, Hunnemannia, Hollyhock, Larkspur, Lobelia, Linum, Lupin, Marigold, Myosotis Mirabilis, Mimulus, Mignonette, Nasturtium, Nemesis, Nicotiana, Nigella, Pentstemon, Petunia, Phlox, Poppies, Portulaca, Salvia, Salpiglossis, Scabiosa, Schizanthus, Stevia, Stocks, Statice, Sweet William, Verbena, Viola, Sunflower, Wallflower, Zinnia.

PLANTS of Begonia, Chrysanthemum, Columbine, Delphinium, Gerbera, Pansy, Petunia, Romneya Coulteri, Shasta Daisy, Vine Seeds.

BULBS of Cannas, Caladiums, Dahlia, Gladiolus and Tuberous.

MAY

VEGETABLES—Seeds of Artichoke, Asparagus, Beets, Beans, Cabbage, Carrots, Celery Plants, Corn, (Sweet and Field) Cucumber, Egg Plant, Lettuce, Melons, (Musk, Water, and Casabas) Okra, Onions, Parsley, Parsnip, Peas, Peppers; Transplant Potatoes, Sweet Potatoes (Plants) Pumpkin, Radish, Rhubarb, Salsify, Spinach, (Summer) Squash, Tomato.

FLOWERS—Seeds of Abronia, Acroclinium, Ageratum, Amaranthus, Asters, Balsam, Carnation, Calendula, Celosia, Centaurea, Calliopsis, Cosmos, Daisies, Annual Chrysanthemum, Candytuft, Dianthus, Gaillardia, Gomphrena, Gypsophila, Helichrysum, Hunnemannia, Lobelia, Larkspur, Marigold, Matricaria, Nasturtium, Nemesis, Nicotiana, Nigella, Phlox, Petunia, Portulaca, Salvia, Salpiglossis, Scabiosa, Schizanthus, Stevia, Sunflower, Statice, Zinnia.

PLANTS of Antirrhinum, Begonia, Bellis Daisy, Coreopsis, Carnation, Chrysanthemum, Dahlia, Delphinium, Gaillardia, Gerbera, Hollyhocks, Myosotis, Petunia, Pentstemon, Salvia, Verbena and Zinnia. Sow Vine Seeds.

BULBS of Canna, Dahlia, Gladiolus, Tuberous.

JUNE AND JULY

VEGETABLES—Seeds of Artichoke, Beets, Beans, Cabbage, Carrots, Celery Plants, Corn, (Sweet and Field) Cucumber, Egg Plant, Lettuce, Melons, (Musk, Water and Casabas) Okra, Parsley, Parsnip, Peas, Pepper Plants, Potatoes, Sweet Potatoes, (Plants) Pumpkin, Radish, Spinach (Summer) Tomato.

FLOWERS—Seeds of Calendula, Candytuft, Cosmos, Centaurea, Cineraria, Daisies, Marigold, Nasturtium, Portulaca, Poppies, Salpiglossis, Zinnia.

PLANTS of Asters, Ageratum, Begonia, Bellis, Calendula, Carnation, Chrysanthemum, Cosmos, Dahlia, Daisy, Marigold, Pansy, petunia, Pentstemon, Salvia, Stocks, Zinnia.

BULBS of Gladiolus, Tuberous.

AUGUST

VEGETABLES—Artichoke, Beets, Beans, early varieties, Brussels Sprouts, Cabbage, Cauliflower, Carrots, Chervil, Chives, Chicory, Corn, Cress, Cucumber, Egg Plant, Endive, Garlic, Kale, Kohl Rabi, Leek, Lettuce, Mustard, Onion, Parsley, Parsnip, Peas, Pepper, Potatoes, Radish, Salsify, Spinach, (Summer) Tomatoes, Turnips.

FLOWERS—Calendula, Cineraria, Centaurea, Cosmos, Pansies, Primula, Stocks, Sweet Peas. Begin sowing seeds of hardy perennials for next year's flowering, such as Aquilegia, Bellis, Daisy, Canterbury, Bells, Coreopsis, Cyclamen, Delphinium, Digitalis, Forget-me-not, Gaillardia, Hollyhocks, Pentstemon, Perennial Poppies, Phlox, Pyrenthrum, Snapdragons, Verbena, Viola and Wallflower.

PLANTS of Cineraria, Stocks, Pansies, Violets.

BULBS of Freesias, Callas, Ranunculus.

SEPTEMBER

VEGETABLES—Seeds of Artichoke, Beets, Beans, Brussels Sprouts, Cabbage, Carrots, Cauliflower, Chervil, Chives, Chicory, Cress, Cucumber, Egg Plant, Endive, Garlic, Kale, Kohl Rabi, Leek, Lettuce, Mustard, Onions, Parsley, Prasnip, Peas, Peppers, Potatoes, Radish, Salsify, Spinach, (Winter) Squash, Tomatoes, Turnips.

FLOWERS—Seeds of Calendula, Centaurea, Cineraria, African Daisy, Nemesis, Cosmos, Linum, Pansy, Primula, Stocks and Winter Sweet Peas. Continue sowing hardy perennials for next year's flowering, such as Aquilegia, Bellis Daisy, Canterbury Bells, Coreopsis, Cyclamen, Delphinium, Digitalis, Forget-me-not, Gaillardia, Hollyhocks, Petunia, Pentstemon, Perennial Poppies, Phlox, Pyrenthrum, Snapdragon, Verbena, Viola and Wallflower.

PLANTS of Cineraria, Stocks, Pansies, Violets.

BULBS of Callas, Freesias, Ranunculus, Gladiolus, German Iris, Paper White Narcissus, Watsonias, Oxalis, Ixias.

OCTOBER

VEGETABLES—Seeds of Beets, Beans, Brussels Sprouts, Cabbage, Carrots, Cauliflower, Chervil, Chives, Chicory, Cress, Egg Plant, Endive, Garlic, Kale, Kohl Rabi, Leek, Lettuce, Mustard, Onions, Parsley, Parsnip, Peas, Radish, Salsify, Spinach, Turnips.

FLOWERS—Continue sowing seeds for winter blooming of Calendula, Centaurea, Cineraria, Cosmos, African Daisy, Dianthus, Nemesis, Phlox, Pansy, Primula, Scabiosa, Stocks, and Winter Sweet Peas.

Begin sowing annuals in open ground for early spring blooming, Acroclinium, Alyssum, Antirrhinum, Bartonia, Candytuft, Calliopsis, Clarkia, Annual Chrysanthemums, California Poppy, Larkspur, Linum, Lupin, Mignonette, Nigella, Poppies, California Wild Flowers. Continue sowing perennials for next year's flowering—Aquilegia, Bellis, Canterbury Bells, Coreopsis, Cyclamen, Delphinium, Digitalis, Forget-me-not, Gaillardia, Hollyhocks, Pentstemon, Petunia, Perennial Poppies and Phlox, Pyrenthrum, Snapdragon, Verbena, Viola and Wallflower.

PLANTS of Cineraria, Pansies, Stocks, Violets.

BULBS of Anemones, Amaryllis, Callas, Crocus, Freesias, Hyacinths, Ixias, Narcissus, Oxalis, Ranunculus, Spanish Iris, Sparaxis, Tulips, Watsonias, Easter Lillies, German Iris, Montbretias, Gladiolus.

NOVEMBER

VEGETABLES—Seeds of Beets, Beans, Brussels Sprouts, Cabbage, Carrots, Cauliflower, Chervil, Chicory, Chives, Cress, Garlic, Kale, Kohl Rabi, Lettuce, Leek, Mustard, Onions, Parsley, Peas, Radish, Salsify, Spinach (Winter) Turnips.

FLOWERS—Seeds of hardy annuals, Acroclinium, Alyssum, Antirrhinum, Bartonia, Calendula, Candytuft, Calliopsis, Clarkia, Annual Chrysanthemums, California Poppy, Dianthus, Larkspur, Lupin, Mignonette, Nigella, Nemesis, Petunia, Pansy, Phlox, Stocks, Winter Sweet Peas and California Wild Flowers.

PLANTS of Carnation, Canterbury Bells, Cineraria, Columbine, Foxglove, Pansies, Pentstemon, Snapdragon, Stocks, Verbena, Violets.

BULBS of Amaryllis, Anemones, Callas, Crocus, Hyacinthus Ixias, Narcissus, Oxalis, Ranunculus, Spanish Iris, Sparaxis, Tulips, Watsonias, Lilies, Freesias, German Iris, Gladiolus.

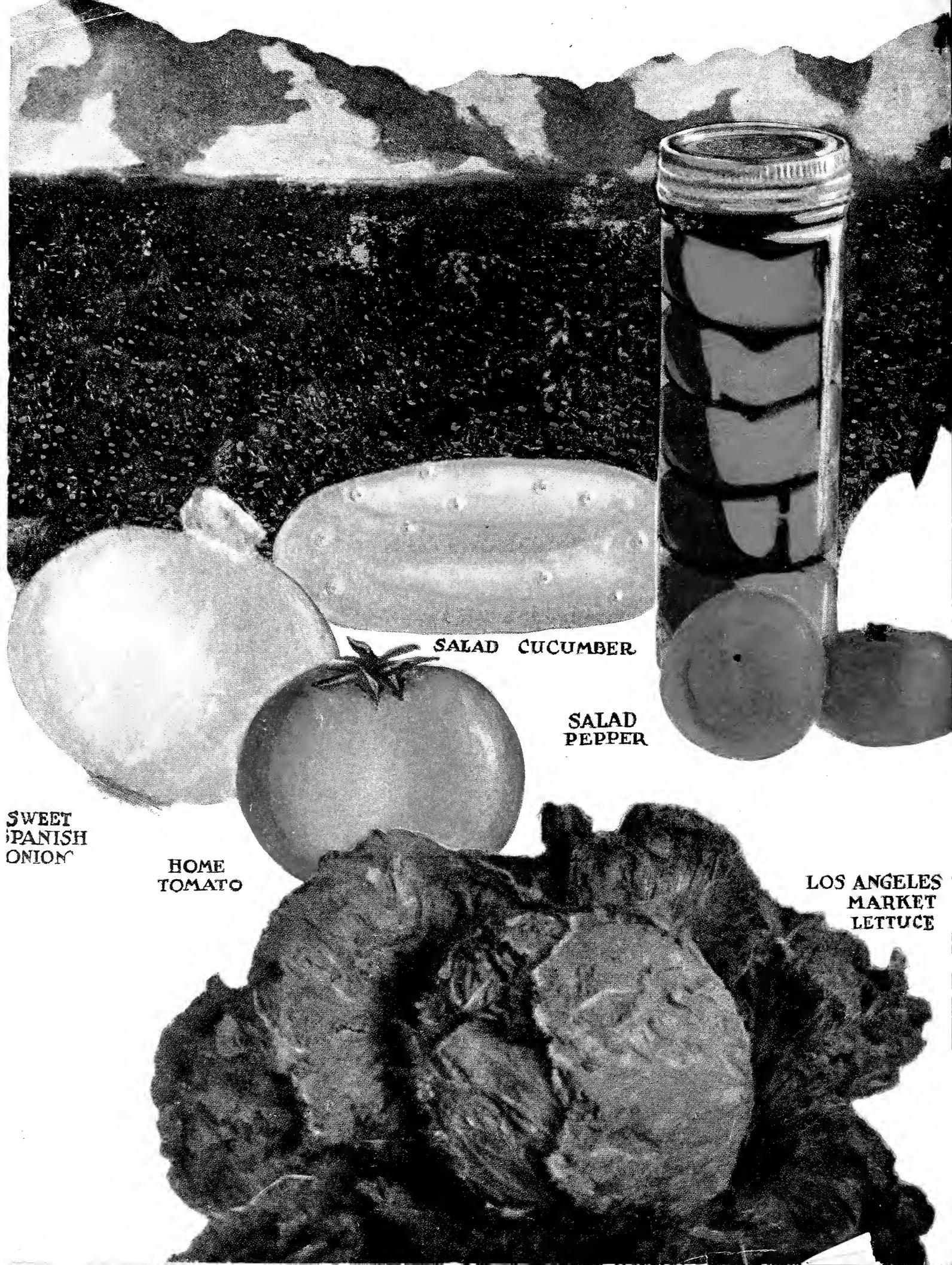
DECEMBER

VEGETABLES—Artichoke Plants, Asparagus Roots, Seeds of Beets, Beans, Brussels Sprouts, Cabbage, Cauliflower, Chervil, Chicory, Chives, Cress, Endive, Garlic, Horse Radish, Kale, Kohl Rabi, Leek, Lettuce, Mustard, Onions, Parsley, Parsnips, Peas, Potatoes, Radish, Rhubarb Roots, Salsify, Spinach (Winter) Turnips, Onion sets.

FLOWERS—Sow seeds of hardy annuals, Acroclinium, Alyssum, Antirrhinum, Bartonia, Calendula, Candytuft, Calliopsis, Clarkia, Annual Chrysanthemums, California Poppy, Dianthus, Larkspur, Lupin, Mignonette, Nigella, Nemesis, Pansy, Phlox, Stocks, Winter Sweet Peas and California Wild Flowers.

PLANTS of Carnation, Canterbury Bells, Columbine, Foxglove, Pansies, Pentstemon, Snapdragon, Stocks, Shasta Daisy, Verbena, Violets.

BULBS of Amaryllis, Callas, Gladiolus, Hyacinths, Narcissus, Ranunculus, Tulips, Watsonia, Lilies.



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ONION

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SALAD
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